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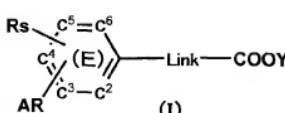
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(54) Title: SUBSTITUTED ARYLALKANOIC ACID DERIVATIVE AND USE THEREOF



D represents a single bond, oxygen atom and the like, Rx represents a saturated alkyl group having 1 to 8 carbon atoms and the like, AR represents a partially unsaturated or completely unsaturated condensed bicyclic carbon ring or a heterocyclic ring, and Y represents hydrogen atom, a lower alkyl group having 1 to 4 carbon atoms and the like] or a salt thereof. A compound having prostaglandin production-suppressing action and leukotriene production-suppressing action is provided.

(57) **Abstract:** A compound represented by the formula (I)[In the formula, Link represents a saturated or unsaturated straight hydrocarbon chain having 1 to 3 carbon atoms, C2 to C6 in the aromatic ring (E) independently represent a ring-constituting carbon atom, one of the ring-constituting carbon atoms may be replaced with V, V represents nitrogen atom, or carbon atom substituted with Zx, Zx represents a saturated alkyl group having 1 to 4 carbon atoms and the like, Rs represents -D-Rx etc.]

DESCRIPTION

Substituted Arylalkanoic Acid Derivative and Use Thereof

Field of the Invention

The present invention relates to a novel substituted arylalkanoic acid derivative. More specifically, the present invention relates to a substituted arylalkanoic acid derivative having an action as a medicament and a synthetic intermediate of said compound.

Background Art

Various kinds of prostaglandins and various kinds of leukotrienes are produced in the bodies of mammals in response to variety of stimuli such as inflammatory stimuli and physical stimuli.

Both of prostaglandins and leukotrienes are metabolites of arachidonic acid, and they are physiologically active substances referred to as lipid mediators, and they cause various physiological responses of mammals by binding to receptors expressed on surfaces of various cells or in the cells.

Arachidonic acid is produced from a phospholipid as a substrate, such as phosphatidylcholine which is a cell membrane component, with the aid of an enzymatic activity of phospholipase A₂ (PLA₂).

Arachidonic acid produced by the action of PLA₂ is converted into prostaglandin (PG) H₂ with the aid of an enzymatic activity of constitutive type cyclooxygenase (COX) 1 or inducible type COX-2, and further converted into PGE₂, PGD₂, PGF_{2α}, PGI₂, thromboxane (TX) A₂ and the like with the aid of each synthetic enzyme. Further, arachidonic acid is also metabolized by the action of 5-lipoxygenase (5-LO) and thereby converted to leukotriene (LT) A₄, and further

converted to LTB_4 , LTC_4 , LTD_4 , LTE_4 and the like by the enzymatic activities of LTA_4 hydrolase, LTC_4 synthase, glutathione S-transferase and the like [Goodman & Gilman, Pharmacological Basis of Therapeutics, 9th edition, p.801, 1999 (Hirokawa Shoten); Funk, C.D., SCIENCE, vol. 294, p.1871, 2001].

Prostaglandins bind to each specific receptor to cause inflammatory reactions such as fervescence, enhancement of vascular permeability, vasodilation, swelling and pain, bronchial smooth muscle contraction, platelet aggregation, tumor cell proliferation, enhancement of bone resorption, nerve cell degeneration and the like, and thus play important roles in expression of symptoms or pathological formation for various diseases.

Leukotrienes are physiologically active substances which bind to each specific receptor to cause inflammatory reactions such as excessive accumulation of leucocytes and enhancement of vascular permeability, smooth muscle contraction, mucus secretion, proliferation of tumor cells and the like, and thus play important roles in expression of symptoms or pathological formation for various diseases.

Although inflammatory reactions themselves are essential reactions for living bodies to survive when they face pathogenic substances and affections, they are sometimes excessively caused or continue without any reason for providing evident benefit under certain situations or in certain diseases [Goodman & Gilman, Pharmacological Basis of Therapeutics, 9th edition, p.827, 1999 (Hirokawa Shoten)]. The condition of living body referred to in this specification wherein an acute or chronic inflammatory reaction is observed means a condition that an excessive or unbeneficial acute or temporary inflammatory reaction or chronic and persistent inflammatory reaction is caused. Further, an inflammatory reaction refers to a series of events caused by stimuli, for example, physical hazards such as heat, infective substances, ischemia, antigen/antibody reaction and the like, and it is accompanied by flare, swelling, hyperalgesia, algesic onset and the like as well.

known macroscopic clinical symptoms. It is known that, as histological mechanisms for these reactions, vasodilation, enhancement of vascular permeability, infiltration of leucocytes and phagocytes, histological decomposition and fibrosing and the like are caused [Goodman & Gilman, Pharmacological Basis of Therapeutics, 9th edition, p.827, 1999 (Hirokawa Shoten)]. It is known that many of these histological reactions are caused by prostaglandins and/or leukotrienes, and prostaglandins and/or leukotrienes plays important roles in inflammatory reactions.

For example, it was reported that, in a pathological tissue of rheumatoid arthritis, which is an autoimmune and chronic inflammatory disease, expression of COX-2 and production of PGE₂ and TXA₂ as well as expression of 5-LO and production of LTB₄ were observed (Bonnet et al., Prostaglandins, 1995, vol. 50, p.127), and in a mouse deficient in FLAP, which is a protein required for activation of 5-LO, symptom of collagen-induced arthritis, which is a pathological model of chronic rheumatoid arthritis, was milder compared with that in a wild-type mouse (Griffiths et al., J. Exp. Med., 1997, vol. 185, p.1123), and thus it has been suggested that prostaglandins and leukotrienes play important roles in the pathological formation of chronic rheumatoid arthritis.

It was reported that, in a pathological tissue of bronchial asthma, one of chronic allergic diseases, excessive production of PGD₂ and TXA₂ as well as excessive production of LTC₄ and LTD₄ were observed (Wenzel et al., Am Rev. Respir. Dis., 1990, vol. 142, p.112), and an airway hypersensitive reaction, which is a pathological model of bronchial asthma, was unlikely to occur in a PGD₂ receptor deficient mouse (Matsuoka et al., SCIENCE, vol. 287, p.2013, 2000). Thus, it has been demonstrated that roles of prostaglandins and leukotrienes are important in bronchial asthma.

In a cerebral tissue after ischemic reperfusion, expression of COX-2

increased, and concentrations of PGE₂ and TXAs increased, whereas activity of 5-LO increased, and production amount of LTC₄ increased (Ohtsuki et al., Am. J. Physiol., 1995, vol. 268, p.1249). Thus, it is known that prostaglandins and leukotrienes play important roles in formation of infarct that is accepted as an ischemic reperfusion injury.

It has been revealed that, in a pathological tissue of Alzheimer's disease, one of the diseases with neurodegeneration, the COX activity and 5-LO activity increased, prostaglandins and leukotrienes cause formation of the β -amyloid protein, one of the pathogenic substances of Alzheimer's disease, and further cause degeneration of nerve cells (Sugaya et al., Jpn. J. Pharmacol., 2000, vol. 82, p.85), and thus it is believed that prostaglandins and leukotrienes play important roles in the formation of neurodegenerative diseases such as Alzheimer's disease.

Furthermore, for example, it was reported that, in a pathological tissue of colon cancer, COX and 5-LO were expressed, and amounts of production of prostaglandins and leukotrienes were increased (Dreyling et al., Biochim. Biophys. Acta., 1986, vol. 878, p.184), and leukotriene caused increase in colon cancer cells (Qiao et al., Biochim. Biophys. Acta, 1995, vol. 1258, p.215; Hong et al., Cancer Res., 1999, vol. 59, p.2223). Thus, it is believed that prostaglandins and leukotrienes play important roles also in tissues of large bowel cancer.

Involvement of prostaglandins and/or leukotrienes in diseases and pathological conditions is not limited to those diseases exemplified above, and it has been demonstrated that prostaglandins and/or leukotrienes are involved in variety of conditions, various diseases, or various pathological conditions where acute or chronic inflammatory reactions are observed and their roles are important.

For the above reason, various prostaglandin production suppressors or leukotriene production suppressors are used as agents for prophylactic or therapeutic treatment of conditions, various diseases or pathological conditions

where an acute or chronic inflammatory reaction is recognized. Various non-steroidal anti-inflammatory drugs (NSAIDS) as medicaments having a prostaglandin production-suppressing action are available and used as therapeutic agents for chronic rheumatoid arthritis and osteoarthritis, antiphlogistic analgesic agents for injury and the like, prophylactic agents for cerebral infarction or myocardial infarction, prophylactic agents for colon polypsis and the like. However, the class of NSAIDS suppress only production of prostaglandins, and as a result, they increase amounts of production of leukotrienes, and exhibit side effects such as asthmatic attack and gastrointestinal injury as well as renal disturbance. Furthermore, a difference between an effective dose and a dose inducing the side effects is small in these NSAIDS, and no satisfactory agent is available from a viewpoint of therapeutic effect. A 5-LO inhibitor is available which is described in European Patent No. 279263 as a medicament having a leukotriene production-suppressing action, and the inhibitor is known as a prophylactic agent for asthma. However, since the agent causes side effects such as hepatic disorder, its dosage is limited, and the agent is not satisfactory also from a viewpoint of therapeutic effect. Since steroid agents suppress production of both of prostaglandins and leukotrienes, they are used as prophylactic agents or therapeutic agents for conditions of living bodies, various diseases and pathological conditions where various acute or chronic inflammatory reactions are observed. However, their actions are not limited to the lipid mediator production-suppressing action, and they exhibit severe side effects such as induction and exacerbation of infectious diseases due to the immunosuppression action, growth retardation due to normal cell antiproliferative activity, anetoderma and peptic ulcer. Therefore, their uses are limited.

Furthermore, for the above reasons, it is considered that compounds, that suppress the production of both of prostaglandins and leukotrienes and have reduced side effect, are effective as therapeutic agents or prophylactic agents for

such conditions of living bodies, diseases or pathological conditions in mammals as described above, and methods of using such compounds together with medicaments available at present are more effective therapeutic or prophylactic methods.

Therefore, development of compounds suppressing the production of both of prostaglandins and leukotrienes, and manufacture of pharmaceutical preparations thereof are strongly desired.

As compounds structurally similar to the compounds of the present invention, for example, biphenyl-5-alkanoic acid derivatives and use thereof are described in WO99/19291. However, the moiety of these compounds that corresponds to "AR" included in the formula (I) of the compounds of the present invention is phenyl group, and thus structural features of the above compounds are different. Further, biaryl phospholipase A₂ inhibitors are described in U.S. Patent No. 5,391,817 [Japanese Patent Unexamined Publication (Kokai) No. 7-22399]. However, the moiety of these compounds that corresponds to "AR" included in the formula (I) of the compounds of the present invention is only defined to be phenyl group, and thus the structural features of the above compounds are different. Bicyclic heterocyclic compounds are described in WO00/35886 as protease inhibitors. However, the substituents of these compounds on the moiety that corresponds to "AR" included in the formula (I) of the compounds of the present invention are different, and further, the publication is completely silent about whether or not the compounds described in the above patent document have any prostaglandin production-suppressing action or leukotriene production-suppressing action.

[Patent document 1] WO99/19291

[Patent document 2] U.S. Patent No. 5,391,817

[Patent document 3] WO00/35886

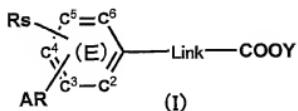
Disclosure of the Invention

An object of the present invention is to provide a novel compound having superior prostaglandin production-suppressing action and leukotriene production-suppressing action. Another object of the present invention is to provide a compound for prophylactic and/or therapeutic treatment of various inflammatory diseases, autoimmune diseases, allergic diseases, pain and fibrosis in mammals caused by lipid mediators. A further object of the present invention is to provide a pharmaceutical composition containing such a compound. A still further object of the present invention is to provide an intermediate for the production of the compound. These objects and other objects as well as advantages of the present invention will be apparent for those skilled in the art from the following descriptions.

In order to achieve the aforementioned objects, the inventors of the present invention conducted various researches. As a result, they found that the substituted arylalkanoic acid derivatives represented by the following general formula, which are novel compounds, had superior prostaglandin production-suppressing action and leukotriene production-suppressing action, and thus accomplished the present invention.

The present invention is embodied by, for example, those described in the following (1) to (191).

(1) A compound represented by the formula (I):



[In the formula, Link represents a saturated or unsaturated straight hydrocarbon chain having 1 to 3 carbon atoms.

C^2 , C^3 , C^4 , C^5 , and C^6 in the aromatic ring (E) independently represent a

ring-constituting carbon atom. One of the ring-constituting carbon atoms to which Rs and AR do not bind may be replaced with V.

V represents nitrogen atom, or carbon atom substituted with Zx. Zx represents a linear or branched saturated alkyl group having 1 to 4 carbon atoms, fluorine atom, chlorine atom, bromine atom, nitro group, -OR⁹, or -N(Rn¹)(Rn²). R⁹ represents hydrogen atom, a lower alkyl group having 1 to 4 carbon atoms, or -A⁶-Qp, wherein A⁶ represents a single bond or methylene, Qp represents phenyl group, and the phenyl group may be substituted with one of T¹ or two or more of the same or different T¹. T¹ represents a linear or branched saturated alkyl group having 1 to 4 carbon atoms, hydroxyl group, fluorine atom, chlorine atom, bromine atom, trifluoromethyl group, nitro group, an alkoxy group having 1 to 4 carbon atoms, or a mono- or dialkylamino group having 1 to 4 carbon atoms. Rn¹ represents hydrogen atom or a linear or branched saturated alkyl group having 1 to 4 carbon atoms, Rn² has the same meaning as Rn¹, or represents -COR²³ or -SO₂R²⁴, or binds to Rn¹ to form a 3- to 6-membered ring together with the nitrogen atom to which they bind to form a saturated nitrogen-containing cycloalkyl group or morpholino group. R²³ represents hydrogen atom, a lower alkyl group having 1 to 4 carbon atoms, a lower alkoxy group having 1 to 4 carbon atoms, -O-A⁶-Qp, or -N(R²⁵)(R²⁶). R²⁵ represents hydrogen atom, or a linear or branched saturated alkyl group having 1 to 4 carbon atoms. R²⁶ has the same meaning as R²⁵, or binds to R²⁵ to form a 3- to 6-membered ring together with the nitrogen atom to which they bind to form a saturated nitrogen-containing cycloalkyl group or morpholino group. R²⁴ represents a lower alkyl group having 1 to 4 carbon atoms, amino group, or a mono- or dialkylamino group having 1 to 4 carbon atoms.

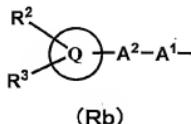
Rs represents -D-Rx or -N(Ry)(Rz).

D represents a single bond, oxygen atom, sulfur atom, -S(O)-, -S(O)₂-, or -C(O)-.

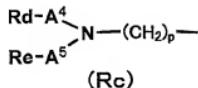
Rx represents a linear or branched saturated alkyl group having 3 to 8 carbon atoms, or represents Ra represented by the following formula:



Rb represented by the following formula:



or Rc represented by the following formula:



k in Ra represents 0 or an integer of 1 to 3. R¹ represents a saturated cyclic alkyl group having 3 to 7 carbon atoms, or a condensed saturated cyclic alkyl group having 6 to 8 carbon atoms, and R¹ may be substituted with one of lower alkyl group having 1 to 4 carbon atoms or two or more of the same or different lower alkyl groups having 1 to 4 carbon atoms. Q in Rb represents a partially unsaturated or completely unsaturated monocyclic or condensed bicyclic carbon ring or a heterocyclic ring (q), and binds to A² at an arbitrary position. The heterocyclic ring (q) contains the same or different 1 to 4 ring-constituting heteroatoms selected from the group consisting of nitrogen atom, oxygen atom, and sulfur atom. A¹ represents a single bond or an alkylene (a) having 1 to 3 carbon atoms, and the alkylene (a) may be substituted with a lower alkyl group having 1 to 4 carbon atoms or phenyl group. A² represents a single bond, oxygen atom, sulfur atom, -S(O)-, -S(O)₂, or -N(R⁴)- (provided that when A² represents oxygen atom, sulfur atom, -S(O)-, -S(O)₂- or -N(R⁴)-, A¹ represents ethylene or trimethylene). R² and R³ independently represent hydrogen atom, a linear or branched saturated

alkyl group having 1 to 4 carbon atoms, oxo group, thioxo group, fluorine atom, chlorine atom, bromine atom, trifluoromethyl group, -OR⁵, -N(R⁶)(R⁶), -NHCOR⁷, -NHSO₂R⁸, or -A⁶-Qa, or they bind to each other to represent methylenedioxy group. Qa represents a partially unsaturated or completely unsaturated monocyclic or condensed bicyclic carbon ring or a heterocyclic ring (qa), binds to A⁶ at an arbitrary position on the ring, and may be substituted with one of T¹ or two or more of the same or different T¹. The heterocyclic ring (qa) contains the same or different 1 to 4 ring-constituting heteroatoms selected from the group consisting of nitrogen atom, oxygen atom, and sulfur atom. R⁴ and R⁶ independently represent hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms. R⁵ and R⁷ independently represent hydrogen atom, a lower alkyl group having 1 to 4 carbon atoms, or -A⁶-Qa. R⁸ represents a lower alkyl group having 1 to 4 carbon atoms. R⁹ has the same meaning as R⁶, or binds to R⁶ to form a 3- to 6-membered ring together with the nitrogen atom to which they bind to represent a saturated nitrogen-containing cycloalkyl group or morpholino group. p in R_c represents an integer of 2 to 4. A⁴ represents a single bond, methylene, or ethylene. A⁵ represents -C(O)-, -C(S)-, or -S(O)₂- . R_d represents hydrogen atom, an alkyl group having 1 to 8 carbon atoms, or Qa. R_e represents an alkyl group having 1 to 8 carbon atoms, -A⁶-Qa, -(CH₂)R¹⁴, -OR²⁸, -SR²⁸, or -N(R²⁹)(R³⁰). i represents an integer of 1 to 3, R¹⁴ represents hydroxyl group, an alkoxy group having 1 to 4 carbon atoms, carboxyl group, or an N,N-dialkylcarbamoyl group having 1 to 4 carbon atoms. R²⁸ represents an alkyl group having 1 to 8 carbon atoms, or -A⁶-Qa. R²⁹ represents an alkyl group having 1 to 8 carbon atoms, an alkoxy carbonyl group having 1 to 4 carbon atoms, or -A⁶-Qa. R³⁰ represents hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms, or binds to R²⁹ to form a 3- to 6-membered ring together with the nitrogen atom to which they bind to represent a saturated nitrogen-containing cycloalkyl group or morpholino group.

Rz has the same meaning as Rx, or Rz represents methyl group, ethyl group, or $\text{-A}^5\text{-Re}$. Ry represents hydrogen atom, an alkyl group having 1 to 8 carbon atoms, or $\text{-A}^6\text{-Qp}$, or Ry may bind to Rz to form, together with a nitrogen atom to which they bind, a saturated or unsaturated 3 to 7-membered nitrogen-containing cyclic group, wherein said nitrogen-containing cyclic group may optionally be substituted with one or two lower alkyl groups having 1 to 4 carbon atoms wherein said two alkyl groups may be the same or different.

AR represents a partially unsaturated or completely unsaturated condensed bicyclic carbon ring or a heterocyclic ring (ar), and may be substituted with one of Xa or two or more of the same or different Xa. The heterocyclic ring (ar) contains the same or different 1 to 4 ring-constituting heteroatoms selected from the group consisting of nitrogen atom, oxygen atom, and sulfur atom. Xa represents a linear or branched saturated alkyl group having 1 to 4 carbon atoms, a saturated cyclic alkyl group having 3 to 7 carbon atoms, oxo group, thioxo group, fluorine atom, chlorine atom, trifluoromethyl group, $-(\text{CH}_2)\text{R}^{14}$, $-\text{OR}^{10}$, $-\text{N}(\text{R}^{11})(\text{R}^{12})$, $-\text{SO}_2\text{R}^{13}$, or $-\text{COR}^{27}$. R¹⁰ represents hydrogen atom, a lower alkyl group having 1 to 4 carbon atoms, or $-(\text{CH}_2)_2\text{R}^{14}$. R¹¹ represents hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms. R¹² represents hydrogen atom, a lower alkyl group having 1 to 4 carbon atoms, a hydroxyalkyl group having 2 to 4 carbon atoms, $-\text{COR}^{15}$, or $-\text{SO}_2\text{R}^{16}$, or binds to R¹¹ to form a 3- to 6-membered ring together with the nitrogen atom to which they bind to represent a saturated nitrogen-containing cycloalkyl group or morpholino group. R¹⁵ represents a lower alkyl group having 1 to 4 carbon atoms, a hydroxyalkyl group having 2 to 4 carbon atoms, amino group, a mono- or dialkylamino group having 1 to 4 carbon atoms, or $\text{-A}^6\text{-Qa}$. R¹³ and R¹⁶ independently represent a lower alkyl group having 1 to 4 carbon atoms, amino group, or a mono- or dialkylamino group having 1 to 4 carbon atoms. R²⁷ represents hydrogen atom, hydroxyl group, an alkoxy group having 1 to 4 carbon

atoms, a lower alkyl group having 1 to 4 carbon atoms, amino group, or a mono- or dialkylamino group having 1 to 4 carbon atoms.

Y represents hydrogen atom, a lower alkyl group having 1 to 4 carbon atoms, -(CH₂)_mN(R¹⁸)(R¹⁹), or -C(R²⁰)₂OC(O)A³R²¹. Symbol m represents an integer of 2 or 3. R¹⁸ is the same as R¹⁹, or binds to R¹⁹ to form a 3- to 6-membered ring together with the nitrogen atom to which they bind to represent a saturated nitrogen-containing cycloalkyl group or morpholino group. R¹⁹ represents methyl group, ethyl group, or propyl group. R²⁰ represents hydrogen atom, methyl group, ethyl group, or propyl group. R²¹ represents a lower alkyl group having 1 to 4 carbon atoms, a cyclic saturated alkyl group having 3 to 6 carbon atoms, or phenyl group, and A³ represents a single bond, or oxygen atom. This compound may sometimes be hereinafter referred to simply as "Compound (I)" of the present invention.] or a salt thereof.

(1-2) The compound or salt thereof according to (1), wherein, in the formula (I), Link is -(CH₂)_n, n is an integer of 1 to 3, Rz has the same meaning as that of Rx or represents -A⁵-Re when Rs is -N(Ry)(Rz), and Ry is hydrogen atom, an alkyl group having 1 to 8 carbon atoms, or A⁶-Qp, or Ry binds to Rz to form, together with a nitrogen atom to which they bind, a saturated or unsaturated 3 to 7-membered nitrogen-containing cyclic group.

(2) The compound or salt thereof according to (1) or (1-2) mentioned above, wherein, in the formula (I), AR binds to any atom among C² and C³ in the aromatic ring (E).

(3) The compound or salt thereof according to any one of (1) to (2) mentioned above, wherein, in the formula (I), n is an integer of 2 (the description of "according to any one of (1) to (2)" includes (1-2) mentioned above, and the same or similar description should be construed in the same manner hereinafter in the specification).

(4) The compound or salt thereof according to any one of (1) to (3) mentioned above,

wherein, in the formula (I), AR is a residue of naphthalene, benzofuran, benzo[b]thiophene, indole, benzothiazole, dihydro-3H-benzothiazole, quinoline, dihydro-1H-quinoline, benzo[d]isothiazole, 1H-indazole, benzo[c]isothiazole, 2H-indazole, imidazo[1,2-a]pyridine, 1H-pyrrolo[2,3-b]pyridine, isoquinoline, dihydro-2H-isoquinoline, cinnoline, quinazoline, quinoxaline, 1H-benzimidazole, benzoaxazole, 1H-pyrrolo[3,2-b]pyridine, benzo[1,2,5]thiadiazole, 1H-benzotriazole, 1,3-dihydropyrrolo[2,3-b]pyridine, 1,3-dihydrobenzimidazole, dihydro-3H-benzoxazole, phthalazine, [1,8]naphthalidine, [1,5]naphthalidine, 1H-pyrrolo[3,2-c]pyridine, 1H-pyrrolo[2,3-c]pyridine, 1H-pyrazolo[4,3-b]pyridine, 1H-pyrazolo[4,3-c]pyridine, 1H-pyrazolo[3,4-c]pyridine, 1H-pyrazolo[3,4-b]pyridine, [1,2,4]triazolo[4,3-a]pyridine, thieno[3,2-c]pyridine, thieno[3,2-b]pyridine, 1H-thieno[3,2-c]pyrazole, benzo[d]isoxazole, benzo[c]isoxazole, indolizine, 1,3-dihydroindole, 1H-pyrazolo[3,4-d]thiazole, 2H-isoindole, [1,2,4]triazolo[1,5-alpyrimidine, 1H-pyrazolo[3,4-b]pyrazine, 1H-imidazo[4,5-b]pyrazine, 7H-purine, or 4H-chromene (the aforementioned residue may be substituted with one of Xa or two or more of the same or different Xa).

(5) The compound or salt thereof according to any one of (1) to (3) mentioned above, wherein, in the formula (I), AR is naphthalen-2-yl group, naphthalen-1-yl group, benzofuran-5-yl group, benzofuran-4-yl group, benzofuran-2-yl group, benzo[b]thiophen-5-yl group, benzo[b]thiophen-4-yl group, benzo[b]thiophen-2-yl group, indol-5-yl group, indol-4-yl group, indol-6-yl group, benzothiazol-6-yl group, benzothiazol-7-yl group, benzothiazol-5-yl group, benzothiazol-4-yl group, dihydro-3H-benzothiazol-6-yl group, dihydro-3H-benzothiazol-7-yl group, dihydro-3H-benzothiazol-5-yl group, dihydro-3H-benzothiazol-4-yl group, quinolin-6-yl group, quinolin-3-yl group, quinolin-5-yl group, quinolin-7-yl group, dihydro-1H-quinolin-6-yl group, dihydro-1H-quinolin-5-yl group, benzo[d]isothiazol-5-yl group, benzo[d]isothiazol-4-yl group, benzo[d]isothiazol-6-yl group, benzo[d]isothiazol-7-yl

group, 1H-indazol-5-yl group, 1H-indazol-4-yl group, 1H-indazol-6-yl group, benzo[c]isothiazol-5-yl group, benzo[cl]isothiazol-4-yl group, benzo[cl]isothiazol-6-yl group, benzo[cl]isothiazol-7-yl group, 2H-indazol-5-yl group, 2H-indazol-4-yl group, 2H-indazol-6-yl group, imidazo[1,2-al]pyridin-6-yl group, imidazo[1,2-al]pyridin-7-yl group, 1H-pyrrolo[2,3-bl]pyridin-5-yl group, 1H-pyrrolo[2,3-bl]pyridin-4-yl group, isoquinolin-6-yl group, isoquinolin-3-yl group, isoquinolin-5-yl group, isoquinolin-7-yl group, dihydro-2H-isoquinolin-6-yl group, dihydro-2H-isoquinolin-5-yl group, cinnolin-6-yl group, cinnolin-5-yl group, quinazolin-6-yl group, quinazolin-7-yl group, quinazolin-5-yl group, quinoxalin-2-yl group, quinoxalin-6-yl group, quinoxalin-5-yl group, 1H-benzimidazol-5-yl group, 1H-benzimidazol-4-yl group, benzoxazol-5-yl group, benzoxazol-6-yl group, benzoxazol-4-yl group, benzoxazol-7-yl group, 1H-pyrrolo[3,2-bl]pyridin-5-yl group, 1H-pyrrolo[3,2-bl]pyridin-6-yl group, benzo[1,2,5]thiadiazol-5-yl group, benzo[1,2,5]thiadiazol-4-yl group, 1H-benzotriazol-5-yl group, 1H-benzotriazol-4-yl group, 1,3-dihydropyrrolo[2,3-bl]pyridin-5-yl group, 1,3-dihydropyrrolo[2,3-bl]pyridin-4-yl group, 1,3-dihydrobenzimidazol-5-yl group, 1,3-dihydrobenzimidazol-4-yl group, dihydro-3H-benzoxazol-6-yl group, dihydro-3H-benzoxazol-7-yl group, dihydro-3H-benzoxazol-5-yl group, dihydro-3H-benzoxazol-4-yl group, phthalazin-6-yl group, phthalazin-5-yl group, [1,8]naphthalidin-3-yl group, [1,8]naphthalidin-4-yl group, [1,5]naphthalidin-3-yl group, [1,5]naphthalidin-4-yl group, 1H-pyrrolo[3,2-cl]pyridin-6-yl group, 1H-pyrrolo[3,2-cl]pyridin-4-yl group, 1H-pyrrolo[2,3-cl]pyridin-4-yl group, 1H-pyrazolo[4,3-bl]pyridin-5-yl group, 1H-pyrazolo[4,3-bl]pyridin-6-yl group, 1H-pyrazolo[4,3-cl]pyridin-4-yl group, 1H-pyrazolo[3,4-cl]pyridin-4-yl group, 1H-pyrazolo[3,4-bl]pyridin-5-yl group, 1H-pyrazolo[3,4-bl]pyridin-4-yl group, [1,2,4]triazolo[4,3-al]pyridin-6-yl group, [1,2,4]triazolo[4,3-al]pyridin-7-yl group, thieno[3,2-cl]pyridin-2-yl group, thieno[3,2-

c]pyridin-3-yl group, thieno[3,2-c]pyridin-6-yl group, thieno[3,2-b]pyridin-2-yl group, thieno[3,2-b]pyridin-3-yl group, thieno[3,2-b]pyridin-5-yl group, thieno[3,2-b]pyridin-6-yl group, 1H-thieno[3,2-c]pyrazol-5-yl group, 1H-thieno[3,2-c]pyrazol-4-yl group, benzo[d]isoxazol-5-yl group, benzo[d]isoxazol-4-yl group, benzo[d]isoxazol-6-yl group, benzo[d]isoxazol-7-yl group, benzo[c]isoxazol-5-yl group, benzo[c]isoxazol-4-yl group, benzo[c]isoxazol-6-yl group, benzo[c]isoxazol-7-yl group, indolizin-7-yl group, indolizin-6-yl group, indolizine-8-yl group, 1,3-dihydroindol-5-yl group, 1,3-dihydroindol-4-yl group, 1,3-dihydroindol-6-yl group, 1H-pyrazolo[3,4-d]thiazol-5-yl group, 2H-isoindol-5-yl group, 2H-isoindol-4-yl group, [1,2,4]triazolo[1,5-a]pyrimidin-6-yl group, 1H-pyrazolo[3,4-b]pyrazin-5-yl group, 1H-imidazo[4,5-b]pyrazin-5-yl group, 7H-purin-2-yl group, 4H-chromen-6-yl group, or 4H-chromen-5-yl group (the aforementioned groups may be substituted with one of Xa or two or more of the same or different Xa).

(6) The compound or salt thereof according to any one of (1) to (3) mentioned above, wherein, in the formula (I), AR is a residue of naphthalene, benzofuran, benzo[b]thiophene, indole, benzothiazole, dihydro-3H-benzothiazole, quinoline, dihydro-1H-quinoline, benzo[d]isothiazole, 1H-indazole, benzo[c]isothiazole, 2H-indazole, imidazo[1,2-a]pyridine, 1H-pyrrolo[2,3-b]pyridine, isoquinoline, or dihydro-2H-isoquinoline (the aforementioned residue may be substituted with one of Xa or two or more of the same or different Xa).

(7) The compound or salt thereof according to any one of (1) to (3) mentioned above, wherein, in the formula (I), AR is a residue of cinnoline, quinazoline, quinoxaline, 1H-benzimidazole, benzoxazole, 1H-pyrrolo[3,2-b]pyridine, benzo[1,2,5]thiadiazole, 1H-benzotriazole, 1,3-dihydropyrrrole[2,3-b]pyridine, 1,3-dihydrobenzimidazole, dihydro-3H-benzoxazole, phthalazine, [1,8]naphthalidine, [1,5]naphthalidine, 1H-pyrrolo[3,2-c]pyridine, 1H-pyrrolo[2,3-c]pyridine, 1H-pyrazolo[4,3-b]pyridine, 1H-pyrazolo[4,3-c]pyridine, 1H-pyrazolo[3,4-c]pyridine, 1H-pyrazolo[3,4-b]pyridine,

[1,2,4]triazolo[4,3-*a*]pyridine, thieno[3,2-*c*]pyridine, thieno[3,2-*b*]pyridine, 1H-thieno[3,2-*c*]pyrazole, benzo[d]isoxazole, benzo[c]isoxazole, indolizine, 1,3-dihydroindole, 1H-pyrazolo[3,4-d]thiazole, 1H-pyrazolo[3,4-d]thiazole, 2H-isoindole, [1,2,4]triazolo[1,5-*a*]pyrimidine, 1H-pyrazolo[3,4-b]pyrazine, 1H-imidazo[4,5-b]pyrazine, 7H-purine, or 4H-chromene (the aforementioned residue may have one of Xa or two or more of the same or different Xa).

(8) The compound or salt thereof according to any one of (1) to (7) mentioned above, wherein, in the formula (I), R_s is -D-Rx or -N(Ry)(Rz), D is a single bond, oxygen atom, sulfur atom, -S(O)-, -S(O)₂, or -C(O)-, Rx is a linear or branched saturated alkyl group having 3 to 8 carbon atoms, or Ra, Rb, or Rc, k in Ra is 0 or an integer of 1 to 3, R¹ is a saturated cyclic alkyl group having 3 to 7 carbon atoms or a condensed saturated cyclic alkyl group having 6 to 8 carbon atoms, R¹ may be substituted with one of lower alkyl group having 1 to 4 carbon atoms or two or more of the same or different lower alkyl groups having 1 to 4 carbon atoms, Q in Rb is phenyl group, thienyl group, furyl group, pyrrolyl group, pyridyl group, oxazolyl group, isoxazolyl group, thiazolyl group, isothiazolyl group, imidazolyl group, pyrazolyl group, oxadiazolyl group, thiadiazolyl group, triazolyl group, tetrazolyl group, naphthyl group, tetrahydronaphthyl group, indanyl group, indenyl group, quinolyl group, isoquinolyl group, indolyl group, benzofuryl group, benzothienyl group, benzimidazolyl group, benzoxazolyl group, benzothiazolyl group, indazolyl group, 4H-chromenyl group, dihydrobenzodioxyl group, benzoisoxazolyl group, pyrrolopyridinyl group, pyrazolopyridinyl group, triazolopyridinyl group, thienopyridinyl group, thienopyrazolyl group, 1,3-dihydrobenzimidazole group, dihydro-3H-benzoxazole group, or dihydro-3H-benzothiazole group (the aforementioned groups binds to A² at an arbitrary position), A¹ is a single bond or an alkylene (a) having 1 to 3 carbon atoms, the alkylene (a) may be substituted with a lower alkyl group having 1 to 4 carbon atoms or phenyl group, A² is a single

bond, oxygen atom, sulfur atom, -S(O)⁻, -S(O)₂⁻, or -N(R⁴)⁻ (provided that when A² represents oxygen atom, sulfur atom, -S(O)⁻, -S(O)₂⁻, or -N(R⁴)⁻, A¹ represents ethylene or trimethylene), R² and R³ independently represent hydrogen atom, a linear or branched saturated alkyl group having 1 to 4 carbon atoms, oxo group, thioxo group, fluorine atom, chlorine atom, bromine atom, trifluoromethyl group, -OR⁵, -N(R⁶)(R⁶'), -NHCOR⁷, -NHSO₂R⁸, or -A⁶-Qa, or they bind to each other to represent methylenedioxy group, Qa is phenyl group, pyridyl group, oxazolyl group, isoxazolyl group, thiazolyl group, isothiazolyl group, imidazolyl group, pyrazolyl group, oxadiazolyl group, thiadiazolyl group, triazolyl group, tetrazolyl group, naphthyl group, indanyl group, indenyl group, quinolyl group, isoquinolyl group, indolyl group, benzofuryl group, benzothienyl group, benzimidazolyl group, benzoxazolyl group, benzothiazolyl group, or indazolyl group (these groups may be substituted with one of T¹ or two or more of the same or different T¹, and bind to A⁶ at an arbitrary position on the ring), R⁴ and R⁶ independently represent hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms, R⁵ and R⁷ independently represent hydrogen atom, a lower alkyl group having 1 to 4 carbon atoms, or -A⁶-Qa, R⁸ is a lower alkyl group having 1 to 4 carbon atoms, R⁶' has the same meaning as R⁶, or binds to R⁶ to form a 3- to 6-membered ring together with the nitrogen atom to which they bind to form a saturated nitrogen-containing cycloalkyl group or morpholino group, p in R_c is an integer of 2 to 4, A⁴ is a single bond or methylene or ethylene, A⁵ is -C(O)⁻, -C(S)⁻, or -S(O)₂⁻, Rd is hydrogen atom, an alkyl group having 1 to 8 carbon atoms, or Qa, Re is an alkyl group having 1 to 8 carbon atoms, -A⁶-Qa, -(CH₂)_iR¹⁴, -OR²⁸, -SR²⁸, or -N(R²⁹)(R³⁰), i is an integer of 1 to 3, R¹⁴ is hydroxyl group, an alkoxy group having 1 to 4 carbon atoms, carboxyl group, or an N,N-dialkylcarbamoyl group having 1 to 4 carbon atoms, R²⁸ is an alkyl group having 1 to 8 carbon atoms or -A⁶-Qa, R²⁹ is an alkyl group having 1 to 8 carbon atoms, an alkoxycarbonyl group having 1 to 4 carbon atoms, or -A⁶-Qa group, R³⁰ is hydrogen

atom or a lower alkyl group having 1 to 4 carbon atoms, or binds to R²⁹ to form a 3-to 6-membered ring together with the nitrogen atom to which they bind to form a saturated nitrogen-containing cycloalkyl group or morpholino group, Rz has the same meaning as Rx, or is -A⁵-Re, and Ry is hydrogen atom, an alkyl group having 1 to 8 carbon atoms, or -A⁶-Qp, or binds to Rz to form a saturated or unsaturated nitrogen-containing cyclic substituent having 3 to 7 atoms together with nitrogen atom to which they binds.

(9) The compound or salt thereof according to any one of (1) to (8) mentioned above, wherein, in the formula (I), among C², C³, C⁴, C⁵, and C⁶ in the aromatic ring (E), one ring-constituting atom to which Rs or AR does not bind is replaced with nitrogen atom.

(10) The compound or salt thereof according to any one of (1) to (8) mentioned above, wherein, in the formula (I), among C², C³, C⁴, C⁵, or C⁶ in the aromatic ring (E), one ring-constituting atom to which Rs or AR does not bind is replaced with N(Rn¹)(Rn²) (provided that one of Rn¹ and Rn² represents a substituent other than hydrogen atom).

(11) The compound or salt thereof according to (1) or (10) mentioned above, wherein, in the formula (I), Rs is -O-Rx.

(12) The compound or salt thereof according to any one of (1) to (11) mentioned above, wherein, in the formula (I), Rs is -O-Rc.

(13) The compound or salt thereof according to any one of (1) to (10) mentioned above, wherein, in the formula (I), Rs is -N(Ry)(Rz).

(14) The compound or salt thereof according to any one of (1) to (10) mentioned above, wherein, in the formula (I), Rs is -D-Rx, and D is a single bond, sulfur atom, -S(O)-, -S(O)₂-, or -C(O)-.

(15) The compound or salt thereof according to any one of (1) to (10) mentioned above, wherein, in the formula (I), Rs is -S-Rx.

- (16) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), AR binds at the position of C² in the aromatic ring (E), and Rs binds to one of the ring-constituting carbon atoms C³, C⁴, and C⁵.
- (17) The compound or salt thereof according to (16) mentioned above, wherein, in the formula (I), Rs is -O-Rx, and no ring-constituting carbon atom in the aromatic ring (E) is replaced with V.
- (18) The compound or salt thereof according to (16) or (17) mentioned above, wherein, in the formula (I), n is an integer of 2, and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.
- (19) The compound or salt thereof according to (4) mentioned above, wherein, in the formula (I), Link is -(CH₂)_n-, n is an integer of 2, AR binds at the position of C² in the aromatic ring (E), Rs binds to one of ring-constituting carbon atoms C³, C⁴ and C⁵, Rs is -O-Rx, Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms, and all of C², C³, C⁴, C⁵, and C⁶ in the aromatic ring (E) are not replaced with V.
- (20) The compound or salt thereof according to (5) mentioned above, wherein, in the formula (I), Link is -(CH₂)_n-, n is an integer of 2, AR binds at the position of C² in the aromatic ring (E), Rs binds to one of ring-constituting carbon atoms C³, C⁴ and C⁵, Rs is -O-Rx, Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms, and all of C², C³, C⁴, C⁵, and C⁶ in the aromatic ring (E) are not replaced with V.
- (21) The compound or salt thereof according to any one of (16) to (20) mentioned above, wherein, in the formula (I), Xa which may substitute on AR is methyl group, ethyl group, propyl group, hydroxyethyl group, carboxymethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, amino group, methylamino group, dimethylamino group, carboxyl group, carbamoyl group, acetyl group, methanesulfonyl group, sulfamoyl group, or N,N-dimethylsulfamoyl group.

(22) The compound or salt thereof according to any one of (16) to (21) mentioned above, wherein, in the formula (I), Rs is -O-Rx, Rx is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, or cyclohexylmethyl group, or Rb (provided that Q in Rb is phenyl group or indan-2-yl group), A¹ is a single bond, a methylene group substituted with methyl group or ethyl group, or unsubstituted methylene group, or an ethylene group substituted with methyl group or ethyl group, or unsubstituted ethylene group, A² is a single bond, oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)- (provided that when A² represents oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)-, A¹ represents ethylene), and R² and R³ independently represent hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, or dimethylamino group (provided that when Q is phenyl group, A¹ is a single bond or unsubstituted methylene, and A² is a single bond, one of R² and R³ is a substituent other than hydrogen atom).

(23) The compound or salt thereof according to any one of (16) to (22) mentioned above, wherein, in the formula (I), Rx-D- binds at the position of C³ in the aromatic ring (E).

(24) The compound or salt thereof according to any one of (16) to (22) mentioned above, wherein, in the formula (I), Rx-D- binds at the position of C⁴ in the aromatic ring (E).

(25) The compound or salt thereof according to any one of (16) to (22) mentioned above, wherein, in the formula (I), Rx-D- binds at the position of C⁵ in the aromatic ring (E).

(26) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), n is an integer of 1 to 3, AR binds to C², Rs binds to one of the ring-constituting carbon atoms C³, C⁴, and C⁵, a ring-constituting atom among C³, C⁴, and C⁵ to which Rs does not bind may be replaced with V,

V is nitrogen atom or carbon atom substituted with Zx, Zx is fluorine atom, chlorine atom, bromine atom, nitro group, methyl group, hydroxyl group, methoxy group, amino group, N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino group, N,N-dimethylamino group, N,N-diethylamino group, formylamino group, acetylamino group, carbamoylamino group, mesylamino group, or N,N-dimethylsulfonylamino group,

Rs is -D-Rx or -N(Ry)(Rz), D is oxygen atom or sulfur atom, Rx is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-cyclopentylethyl group, or 2-cyclohexylethyl group, or Rb or Rc, Q in Rb is phenyl group, thiienyl group, furyl group, pyridyl group, oxazolyl group, naphthyl group, tetrahydronaphthyl group, indanyl group, indolyl group, or dihydrobenzodioxyl group, and A² is a single bond, oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)- (provided that when A² is oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)-, A¹ represents ethylene). R² and R³ independently represent hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, dimethylamino group, acetylamino group, or methylsulfonylamino group (provided that when Q is phenyl group, A¹ is a single bond or unsubstituted methylene, and A² is a single bond, one of R² and R³ is a substituent other than hydrogen atom). Symbol p in Rc is an integer of 2 or 3, A⁴ is a single bond or methylene, A⁵ is -C(O)-, -C(S)-, or -S(O)₂, Rd is hydrogen atom, or methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, cyclopropyl group, cyclopropylmethyl group, cyclopentyl group, cyclopentylmethyl group, cyclohexyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, or pyridin-4-yl group, Re is methyl group, ethyl group, propyl group, isopropyl group, butyl group,

isobutyl group, t-butyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, cyclopentylmethyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, phenylmethyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, pyridin-4-yl group, furan-2-yl group, furan-3-yl group, thiophen-2-yl group, thiophen-3-yl group, methoxy group, ethoxy group, propyloxy group, isopropyloxy group, butyloxy group, isobutyloxy group, t-butyloxy group, cyclopropyloxy group, cyclopentyloxy group, cyclohexyloxy group, cyclopentylmethoxy group, cyclohexylmethoxy group, phenoxy group, 4-methylphenoxy group, 4-chlorophenoxy group, 4-fluorophenoxy group, thiomethoxy group, amino group, N-methylamino group, N,N-dimethylamino group, N-ethylamino group, N,N-diethylamino group, N-propylamino group, N-isopropylamino group, N-butylamino group, N-isobutylamino group, N-t-butylamino group, N-cyclopropylamino group, N-cyclopentylamino group, N-cyclohexylamino group, N-phenylamino group, N-(4-methylphenyl)amino group, N-(4-chlorophenyl)amino group, N-(4-fluorophenyl)amino group, N-(pyridin-2-yl)amino group, N-(pyridin-3-yl)amino group, N-(pyridin-4-yl)amino group, N-(furan-2-yl)amino group, N-(furan-3-yl)amino group, N-(thiophen-2-yl)amino group, N-(thiophen-3-yl)amino group, pyrrolidino group, piperidino group, morpholino group, methyloxycarbonylamino group, or ethyloxycarbonylamino group,

Rz is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl

group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxyethyl group, 2-(3-chlorophenoxyethyl group, 2-(4-chlorophenoxyethyl group, 2-(phenylthio)ethyl

group, 2-(N-phenyl-N-methylamino)ethyl group, 2-(N-ethyl-N-phenylamino)ethyl group, isobutryl group, isopropylthiocarbonyl group, isopropylsulfonyl group, valeryl group, butylthiocarbonyl group, isovaleryl group, isobutylthiocarbonyl group, pivaloyl group, t-butylthiocarbonyl group, cyclopropylcarbonyl group, cyclopropylthiocarbonyl group, cyclopentylcarbonyl group, cyclopentylthiocarbonyl group, cyclohexylcarbonyl group, cyclohexylthiocarbonyl group, cyclopentylmethylcarbonyl group, cyclopentylmethylthiocarbonyl group, cyclohexylmethylcarbonyl group, cyclohexylmethylthiocarbonyl group, benzoyl group, thiobenzoyl group, phenylsulfonyl group, 4-methylphenylcarbonyl group, 4-methylphenylthiocarbonyl group, 4-methylphenylsulfonyl group, 4-chlorophenylcarbonyl group, 4-chlorophenylthiocarbonyl group, 4-fluorophenylcarbonyl group, 4-fluorophenylthiocarbonyl group, isopropoxy carbonyl group, N-isopropylcarbamoyl group, N-isopropylthiocarbamoyl group, butyloxycarbonyl group, N-butyloxycarbonyl group, N-butylcarbamoyl group, N-butylthiocarbamoyl group, isobutyloxycarbonyl group, N-isobutyloxycarbonyl group, N-isobutylthiocarbamoyl group, t-butyloxycarbonyl group, N-t-butyloxycarbonyl group, N-t-butylcarbamoyl group, N-t-butylthiocarbamoyl group, cyclopropoxycarbonyl group, N-cyclopropylcarbamoyl group, cyclopentyloxycarbonyl group, N-cyclopentylcarbamoyl group, N-cyclopentylthiocarbamoyl group, cyclohexyloxycarbonyl group, N-cyclohexylcarbamoyl group, N-cyclohexylthiocarbamoyl group, cyclopentylmethyloxycarbonyl group, cyclohexylmethyloxycarbonyl group, phenyloxycarbonyl group, N-phenylcarbamoyl group, N-phenylthiocarbamoyl group, 4-methylphenyloxycarbonyl group, N-(4-methylphenyl)carbamoyl group, N-(4-methylphenyl)thiocarbamoyl group, 4-chlorophenyloxycarbonyl group, N-(4-chlorophenyl)carbamoyl group, N-(4-chlorophenyl)thiocarbamoyl group, 4-fluorophenyloxycarbonyl group, N-(4-fluorophenyl)carbamoyl group, N-(4-

fluorophenyl)thiocarbamoyl group, (pyrrolidino-1-yl)carbonyl group, (piperidino-1-yl)carbonyl group, or (morpholino-4-yl)carbonyl group, Ry is hydrogen atom, methyl group, ethyl group, or isobutyl group, or binds to Rz to form pyrrolidino group, piperidino group, piperazino group, morpholino group, pyrrol-1-yl group, imidazol-1-yl group, or pyrazol-1-yl group together with nitrogen atom to which they binds,

AR is naphthalen-2-yl group, naphthalen-1-yl group, benzofuran-5-yl group, benzofuran-4-yl group, benzofuran-2-yl group, benzo[b]thiophen-5-yl group, benzo[b]thiophen-4-yl group, benzo[b]thiophen-2-yl group, indol-5-yl group, indol-4-yl group, indol-6-yl group, benzothiazol-6-yl group, benzothiazol-7-yl group, benzothiazol-5-yl group, benzothiazol-4-yl group, dihydro-3H-benzothiazol-6-yl group, dihydro-3H-benzothiazol-7-yl group, dihydro-3H-benzothiazol-4-yl group, quinolin-6-yl group, quinolin-3-yl group, quinolin-5-yl group, quinolin-7-yl group, dihydro-1H-quinolin-6-yl group, dihydro-1H-quinolin-5-yl group, benzo[d]isothiazol-5-yl group, benzo[d]isothiazol-4-yl group, benzo[d]isothiazol-6-yl group, benzo[d]isothiazol-7-yl group, 1H-indazol-5-yl group, 1H-indazol-4-yl group, 1H-indazol-6-yl group, benzo[c]isothiazol-5-yl group, benzo[c]isothiazol-4-yl group, benzo[c]isothiazol-6-yl group, benzo[c]isothiazol-7-yl group, 2H-indazol-5-yl group, 2H-indazol-4-yl group, 2H-indazol-6-yl group, imidazo[1,2-a]pyridin-6-yl group, imidazo[1,2-a]pyridin-7-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1H-pyrrolo[2,3-b]pyridin-4-yl group, isoquinolin-6-yl group, isoquinolin-3-yl group, isoquinolin-5-yl group, isoquinolin-7-yl group, dihydro-2H-isoquinolin-6-yl group, cinnolin-6-yl group, cinnolin-5-yl group, quinazolin-6-yl group, quinazolin-7-yl group, quinazolin-5-yl group, quinoxalin-2-yl group, quinoxalin-6-yl group, quinoxalin-5-yl group, 1H-benzimidazol-5-yl group, 1H-benzimidazol-4-yl group, benzoxazol-5-yl group, benzoxazol-6-yl group, benzoxazol-4-yl group, benzoxazol-7-yl group, 1H-pyrrolo[3,2-b]pyridin-5-yl group, 1H-pyrrolo[3,2-b]pyridin-6-yl group,

benzo[1,2,5]thiadiazol-5-yl group, benzo[1,2,5]thiadiazol-4-yl group, 1H-benzotriazol-5-yl group, 1H-benzotriazol-4-yl group, 1,3-dihydropyrrolo[2,3-b]pyridin-4-yl group, 1,3-dihydrobenzimidazol-5-yl group, 1,3-dihydrobenzimidazol-4-yl group, dihydro-3H-benzoxazol-6-yl group, dihydro-3H-benzoxazol-7-yl group, dihydro-3H-benzoxazol-5-yl group, dihydro-3H-benzoxazol-4-yl group, phthalazin-6-yl group, phthalazin-5-yl group, [1,8]naphthalidin-3-yl group, [1,8]naphthalidin-4-yl group, [1,5]naphthalidin-3-yl group, [1,5]naphthalidin-4-yl group, 1H-pyrrolo[3,2-c]pyridin-6-yl group, 1H-pyrrolo[3,2-c]pyridin-4-yl group, 1H-pyrazolo[4,3-b]pyridin-5-yl group, 1H-pyrazolo[4,3-b]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-6-yl group, 1H-pyrazolo[3,4-c]pyridin-5-yl group, 1H-pyrazolo[3,4-c]pyridin-4-yl group, 1H-pyrazolo[3,4-b]pyridin-5-yl group, 1H-pyrazolo[3,4-b]pyridin-4-yl group, [1,2,4]triazolo[4,3-a]pyridin-6-yl group, [1,2,4]triazolo[4,3-a]pyridin-7-yl group, thieno[3,2-c]pyridin-2-yl group, thieno[3,2-c]pyridin-3-yl group, thieno[3,2-c]pyridin-6-yl group, thieno[3,2-b]pyridin-2-yl group, thieno[3,2-b]pyridin-3-yl group, thieno[3,2-b]pyridin-5-yl group, thieno[3,2-b]pyridin-6-yl group, 1H-thieno[3,2-c]pyrazol-5-yl group, 1H-thieno[3,2-c]pyrazol-4-yl group, benzo[d]isoxazol-5-yl group, benzo[d]isoxazol-4-yl group, benzod[d]isoxazol-6-yl group, benzo[d]isoxazol-7-yl group, benzoc[c]isoxazol-5-yl group, benzoc[c]isoxazol-6-yl group, benzoc[c]isoxazol-7-yl group, indolizin-7-yl group, indolizin-6-yl group, indolizine-8-yl group, 1,3-dihydroindol-5-yl group, 1,3-dihydroindol-4-yl group, 1,3-dihydroindol-6-yl group, 1H-pyrazolo[3,4-d]thiazol-5-yl group, 2H-isoindol-5-yl group, 2H-isoindol-4-yl group, [1,2,4]triazolo[1,5-a]pyrimidin-6-yl group, 1H-pyrazolo[3,4-b]pyrazin-5-yl group, 1H-imidazo[4,5-b]pyrazin-5-yl group, 7H-purin-2-yl group, 4H-chromen-6-yl group, or 4H-chromen-5-yl group (the aforementioned groups may be substituted with one

of X_a or two or more of the same or different X_a), X_a is oxo group, thioxo group, fluorine atom, chlorine atom, trifluoromethyl group, methyl group, ethyl group, propyl group, 2-hydroxyethyl group, carboxymethyl group, 2-carboxyethyl group, N,N-dimethylcarbamoylmethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, carboxymethoxy group, 2-carboxyethoxy group, N,N-dimethylcarbamoylmethoxy group, amino group, methylamino group, dimethylamino group, 2-hydroxyethylamino group, carbamoylamino group, acetylamino group, furan-2-carboxyamino group, 2-hydroxyacetylamino group, 2-aminoacetylamino group, methylsulfonylamino group, (N,N-dimethylsulfamoyl)amino group, methanesulfonyl group, sulfamoyl group, N-methylsulfamoyl group, N,N-dimethylsulfamoyl group, carboxyl group, acetyl group, carbamoyl group, or N,N-dimethylcarbamoyl group, and Y is hydrogen atom, methyl group or ethyl group.

(27) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), n is an integer of 2,

C² is carbon atom to which AR binds, C³ is carbon atom to which R_s binds, C⁴ may be replaced with V, C⁵ and C⁶ are unsubstituted ring-constituting carbon atoms,

V is nitrogen atom, or carbon atom substituted with Z_x, Z_x is fluorine atom, methyl group, hydroxyl group, amino group, N-methylamino group, or N,N-dimethylamino group,

R_s is -O-R_x, R_x is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group,

5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxyethyl group, 2-(3-

chlorophenoxy)ethyl group, 2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, or 2-(N-ethyl-N-phenylamino)ethyl group,

AR is naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group, 2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group, 1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group, 2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group, 2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group, quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group, 1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-

5-yl group, 1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group, 3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group, imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, 1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, or benzoxazol-5-yl group, and Y is hydrogen atom, methyl group, or ethyl group.

(28) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), n is an integer of 2,

C^2 is carbon atom to which AR binds, C^4 is carbon atom to which Rs binds, C^5 may be replaced with V, C^3 and C^6 represents an unsubstituted ring constituting carbon atom,

V is nitrogen atom, or carbon atom substituted with Zx, Zx is fluorine atom, methyl group, hydroxyl group, amino group, N-methylamino group, or N,N-dimethylamino group,

Rs is -O-Rx, Rx is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl

group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-(2-phenoxyethyl group, 2-(2-chlorophenoxyethyl group, 2-(3-chlorophenoxyethyl group, 2-(4-chlorophenoxyethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, or 2-(N-ethyl-N-phenylamino)ethyl group,

AR is naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-

aminonaphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, **benzo[b]furan-5-yl group, 2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, benzob[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-1H-methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group, 1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group, 2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group, 2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group, quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, **benzo[d]isothiazol-5-yl group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group, 1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group, 1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group, 3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group, imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-(2-hydroxyethyl)-1H-****

pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, 1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, or benzoxazol-5-yl group, and Y is hydrogen atom, methyl group, or ethyl group.

(29) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), AR binds to C³ in the aromatic ring (E), and Rs binds to C⁵ or C⁶ in the aromatic ring (E).

(30) The compound or salt thereof according to (29) mentioned above, wherein, in the formula (I), Rs is -O-Rx, and all of C², C³, C⁴, C⁵, and C⁶ in the aromatic ring (E) are not replaced with V.

(31) The compound or salt thereof according to (29) or (30) mentioned above, wherein, in the formula (I), n is an integer of 2, and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

(32) The compound or salt thereof according to (4) mentioned above, wherein, in the formula (I), Link is -(CH₂)_n-, n is an integer of 2, AR binds to C³ in the aromatic ring (E), Rs binds to the ring-constituting carbon atom C⁵ or C⁶ in the aromatic ring (E), Rs is -O-Rx, Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms, and all of C², C³, C⁴, C⁵, and C⁶ in the aromatic ring (E) are not replaced with V.

(33) The compound or salt thereof according to (5) mentioned above, wherein, in the formula (I), n is an integer of 2, AR binds to C³ in the aromatic ring (E), Rs binds to the ring-constituting carbon atom C⁵ or C⁶ in the aromatic ring (E), Rs is -O-Rx, Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms, and all of C², C³, C⁴, C⁵, and C⁶ in the aromatic ring (E) are not replaced with V.

(34) The compound or salt thereof according to any one of (29) to (33) mentioned above, wherein, in the formula (I), Xa which may substitute on AR is methyl group, ethyl group, propyl group, hydroxyethyl group, carboxymethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, amino group, methylamino group,

dimethylamino group, carboxyl group, carbamoyl group, acetyl group, methanesulfonyl group, sulfamoyl group, or N,N-dimethylsulfamoyl group.

(35) The compound or salt thereof according to any one of (29) to (34) mentioned above, wherein, in the formula (I), Rs is -O-Rx, Rx is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, or cyclohexylmethyl group, or Rb (provided that Q in Rb is phenyl group or indan-2-yl group), A¹ is a single bond, or methylene group substituted with methyl group or ethyl group or unsubstituted methylene group, or ethylene group substituted with methyl group or ethyl group or unsubstituted ethylene group, A² is a single bond, oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)- (provided that when A² is oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)-, A¹ is ethylene), and R² and R³ independently represent hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, or dimethylamino group (provided that when Q is phenyl group, A¹ is a single bond or unsubstituted methylene, and A² is a single bond, one of R² and R³ is a substituent other than hydrogen atom).

(36) The compound or salt thereof according to any one of (29) to (35) mentioned above, wherein, in the formula (I), Rs binds at the position of C⁵ in the aromatic ring (E).

(37) The compound or salt thereof according to any one of (29) to (35) mentioned above, wherein, in the formula (I), Rs binds at the position of C⁶ in the aromatic ring (E).

(38) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), n is an integer of 2,

C³ is carbon atom to which AR binds, C⁶ is carbon atom to which Rs binds, C², C⁴ and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is -O-Rx, Rx is butyl group, isobutyl group, 2-ethylbutyl group,

cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl

group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxyethyl group, 2-(3-chlorophenoxyethyl group, 2-(4-chlorophenoxyethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, or 2-(N-ethyl-N-phenylamino)ethyl group,

AR is naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group, 2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group, 1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group, 2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group, 2-aminobenzothiazol-6-yl group, 2-oxo-2,3-

dihydrobenzothiazol-6-yl group, 2-oxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group, quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzoldisothiazol-5-yl group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group, 1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group, 1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group, 3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group, imidazo[1,2-*a*]pyridin-6-yl group, 1H-pyrrolo[2,3-*b*]pyridin-5-yl group, 1-methyl-1H-pyrrolo[2,3-*b*]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-*b*]pyridin-5-yl group, 1-propyl-1H-pyrrolo[2,3-*b*]pyridin-5-yl group, 1-(2-hydroxyethyl)-1H-pyrrolo[2,3-*b*]pyridin-5-yl group, isoquinolin-6-yl group, 1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, or benzoxazol-5-yl group, and

Y is hydrogen atom, methyl group, or ethyl group.

(39) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), and C⁶ is replaced with V.

(40) The compound or salt thereof according to (39) mentioned above, wherein, in the formula (I), n is an integer of 2, V is carbon atom substituted with Zx, Rs is -O-Rx, and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

(41) The compound or salt thereof according to (4) mentioned above, wherein, in the formula (I), Link is -(CH₂)_n-, n is an integer of 2, AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁶ is carbon atom substituted with Zx, Rs is -O-Rx, and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

(42) The compound or salt thereof according to (5) mentioned above, wherein, in the formula (I), Link is -(CH₂)_n-, n is an integer of 2, AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁶ is carbon atom substituted with

Z_X, R_s is -O-Rx, and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

(43) The compound or salt thereof according to any one of (39) to (42) mentioned above, wherein, in the formula (I), X_a which may substitute on AR is methyl group, ethyl group, propyl group, hydroxyethyl group, carboxymethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, amino group, methylamino group, dimethylamino group, carboxyl group, carbamoyl group, acetyl group, methanesulfonyl group, sulfamoyl group, or N,N-dimethylsulfamoyl group.

(44) The compound or salt thereof according to any one of (39) to (43) mentioned above, wherein, in the formula (I), R_s is -O-Rx, Rx is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, or cyclohexylmethyl group, or R_b (provided that Q in R_b is phenyl group or indan-2-yl group), A¹ is a single bond, or methylene group substituted with methyl group or ethyl group or unsubstituted methylene group, or ethylene group substituted with methyl group or ethyl group or unsubstituted ethylene group, A² is a single bond, oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)- (provided that when A² is oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)-, A¹ is ethylene), R² and R³ independently represent hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, or dimethylamino group (provided that when Q is phenyl group, A¹ is a single bond or unsubstituted methylene, and A² is a single bond, one of R² and R³ is a substituent other than hydrogen atom).

(45) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), n is an integer of 2,

C³ is carbon atom to which AR binds, C⁴ is carbon atom to which R_s binds, C⁶ is carbon atom substituted with Z_X, C² and C⁵ are unsubstituted ring constituting carbon atoms,

Zx is fluorine atom, methyl group, hydroxyl group, amino group, N-methylamino group, or N,N-dimethylamino group,

Rs is -O-Rx, Rx is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-

methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group, 2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, or 2-(N-ethyl-N-phenylamino)ethyl group,

AR is naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group, 2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group, 1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group, 1-(2-

hydroxyethyl)-3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group, 2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group, 2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group, 2-oxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group, quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzodisothiazol-5-yl group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group, 1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group, 1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group, 3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group, imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, 1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, or benzoxazol-5-yl group, and Y is hydrogen atom, methyl group, or ethyl group.

(46) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ is nitrogen atom, and C² and C⁶ are unsubstituted ring-constituting carbon atoms.

(47) The compound or salt thereof according to (46) mentioned above, wherein, in the formula (I), n is an integer of 2, D is oxygen atom, and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

(48) The compound or salt thereof according to (4) mentioned above, wherein, in the formula (I), Link is -(CH₂)_n-, n is an integer of 2, AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ is nitrogen atom, C² and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is -O-Rx, and Y is hydrogen atom

or a lower alkyl group having 1 to 4 carbon atoms.

(49) The compound or salt thereof according to (5) mentioned above, wherein, in the formula (I), Link is -(CH₂)_n, n is an integer of 2, AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ is nitrogen atom, C² and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is -O-Rx, and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

(50) The compound or salt thereof according to any one of (46) to (49) mentioned above, wherein, in the formula (I), Xa which may substitute on AR is methyl group, ethyl group, propyl group, hydroxyethyl group, carboxymethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, amino group, methylamino group, dimethylamino group, carboxyl group, carbamoyl group, acetyl group, methanesulfonyl group, sulfamoyl group, or N,N-dimethylsulfamoyl group.

(51) The compound or salt thereof according to any one of (46) to (50) mentioned above, wherein, in the formula (I), Rs is -O-Rx, Rx is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, or cyclohexylmethyl group, or Rb (provided that Q in Rb is phenyl group or indan-2-yl group), A¹ is a single bond, or methylene group substituted with methyl group or ethyl group or unsubstituted methylene group, or ethylene group substituted with methyl group or ethyl group or unsubstituted ethylene group, A² is a single bond, oxygen atom, sulfur atom, -N(methyl)- or -N(ethyl)- (provided that when A² is oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)-, A¹ is ethylene), and R² and R³ independently represent hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, or dimethylamino group (provided that when Q is phenyl group, A¹ is a single bond or unsubstituted methylene, and A² is a single bond, one of R² and R³ is a substituent other than hydrogen atom).

(52) The compound or salt thereof according to (1-2) mentioned above, wherein, in

the formula (I), n is an integer of 2,

C³ is carbon atom to which AR binds, C⁴ is carbon atom to which Rs binds,
C⁵ is nitrogen atom, C² and C⁶ are unsubstituted ring-constituting carbon atoms,
Rs is -O-Rx, Rx is butyl group, isobutyl group, 2-ethylbutyl group,
cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group,
cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-
fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl
group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-
methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group,
5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group,
4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group,
5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group,
4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl
group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl
group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-
chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl
group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-
methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-
dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl
group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-
chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl
group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-
difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-
dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-
dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-
dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-
(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-

(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group, 2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, or 2-(N-ethyl-N-phenylamino)ethyl group,

AR is naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group, 2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-

indol-5-yl group, 1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group, 2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group, 2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group, 2-oxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group, quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group, 1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group, 1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group, 3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group, imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, 1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, or benzoxazol-5-yl group, and

Y is hydrogen atom, methyl group, or ethyl group.

(53) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ is a ring-constituting carbon atom substituted with Zx, or an unsubstituted ring-constituting carbon atom, C² and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is -D-Rx, and D is a single bond, sulfur atom, -S(O)-, -S(O)₂-, or -C(O)-.

(53-2) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ is nitrogen atom, C² and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is -D-Rx, and D is a single bond, sulfur atom, -S(O)-, -

S(O)₂⁻, or -C(O)⁻.

(53-3) The compound or salt thereof according to (53) or (53-2) mentioned above, wherein, in the formula (I), Rs is -D-Rx and D is single bond.

(54) The compound or salt thereof according to any one of (53) to (53-3) mentioned above, wherein, in the formula (I), n is an integer of 2, and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

(55) The compound or salt thereof according to (4) mentioned above, wherein, in the formula (I), Link is -(CH₂)_n⁻, n is an integer of 2, AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ is a ring-constituting carbon atom substituted with Zx, or an unsubstituted ring-constituting carbon atom, C² and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is -D-Rx, D is a single bond, sulfur atom, -S(O)⁻, -S(O)₂⁻, or -C(O)⁻, and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

(55-2) The compound or a salt thereof according to (4) mentioned above, wherein, in the formula (I), Link is -(CH₂)_n⁻, n is an integer of 2, AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ may be replaced with V, C² and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is -D-Rx, D is a single bond, and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

(56) The compound or salt thereof according to (5) mentioned above, wherein, in the formula (I), Link is -(CH₂)_n⁻, n is an integer of 2, AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ is a ring-constituting carbon atom substituted with Zx, or an unsubstituted ring-constituting carbon atom, C² and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is -D-Rx, D is a single bond, sulfur atom, -S(O)⁻, -S(O)₂⁻, or -C(O)⁻, and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

(56-2) The compound or a salt thereof according to (5) mentioned above, wherein, in the formula (I), Link is -(CH₂)_n⁻, n is an integer of 2, AR binds to C³ in the aromatic

ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ may be replaced with V, C² and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is -D-Rx, D is a single bond, and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

(57) The compound or salt thereof according to any one of (53) to (56-2) mentioned above, wherein, in the formula (I), Xa which may substitute on AR is methyl group, ethyl group, propyl group, hydroxyethyl group, carboxymethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, amino group, methylamino group, dimethylamino group, carboxyl group, carbamoyl group, acetyl group, methanesulfonyl group, sulfamoyl group, or N,N-dimethylsulfamoyl group.

(58) The compound or salt thereof according to any one of (53) to (57) mentioned above, wherein, in the formula (I), Rs is -D-Rx, Rx is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, or cyclohexylmethyl group, or Rb (provided that Q in Rb is phenyl group or indan-2-yl group), A¹ is a single bond, or methylene group substituted with methyl group or ethyl group or unsubstituted methylene group, or ethylene group substituted with methyl group or ethyl group or unsubstituted ethylene group, A² is a single bond, oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)- (provided that when A² represents oxygen atom, sulfur atom, -N(methyl)- or -N(ethyl)-, A¹ represents ethylene), and R² and R³ independently represent hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, or dimethylamino group (provided that when Q is phenyl group, A¹ is a single bond or unsubstituted methylene, and A² is a single bond, one of R² and R³ is a substituent other than hydrogen atom).

(58-2) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), n is an integer of 1 to 3, AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ may be replaced with V, C² and C⁶ are unsubstituted ring-constituting carbon atoms, V is nitrogen atom or V is carbon

atom substituted with Zx, Zx is any one of fluorine atom, methyl group, hydroxyl group, amino group, N-methylamino group, or N,N-dimethylamino group,

Rs is -D-Rx, D is a single bond, Rx is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-cyclopentylethyl group, or 2-cyclohexylethyl group, or Rx is Rb or Rc (provided that Q in Rb is phenyl group, thienyl group, furyl group, pyridyl group, oxazolyl group, naphthyl group, tetrahydronaphthyl group, indanyl group, indolyl group, or dihydrobenzodioxyl group), A² is a single bond, oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)- (provided that when A² represents oxygen atom, sulfur atom, -N(methyl)- or -N(ethyl)-, A¹ represents ethylene), R² and R³ independently represent hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, dimethylamino group, acetylamino group, or methylsulfonylamino group, (provided that when Q is phenyl group, A¹ is a single bond or unsubstituted methylene, and A² is a single bond, one of R² and R³ is a substituent other than hydrogen atom). p in Rc is an integer of 2 or 3, A⁴ is a single bond or methylene, A⁵ is -C(O)-, -C(S)-, or -S(O)₂-, Rd is hydrogen atom, or methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, cyclopropyl group, cyclopropylmethyl group, cyclopentyl group, cyclopentylmethyl group, cyclohexyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, or pyridin-4-yl group, Re is methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, cyclopentylmethyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, phenylmethyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group,

pyridin-3-yl group, pyridin-4-yl group, methoxy group, ethoxy group, propyloxy group, isopropyloxy group, butyloxy group, isobutyloxy group, t-butyloxy group, cyclopropyloxy group, cyclopentyloxy group, cyclohexyloxy group, cyclopentylmethoxy group, cyclohexylmethoxy group, phenyloxy group, 4-methylphenyloxy group, 4-chlorophenyloxy group, 4-fluorophenyloxy group, thiomethoxy group, amino group, N-methylamino group, N,N-dimethylamino group, N-ethylamino group, N,N-diethylamino group, N-propylamino group, N-isopropylamino group, N-butylamino group, N-isobutylamino group, N-t-butylamino group, N-cyclopropylamino group, N-cyclopentylamino group, N-cyclohexylamino group, N-phenylamino group, N-(4-methylphenyl)amino group, N-(4-chlorophenyl)amino group, N-(4-fluorophenyl)amino group, N-(pyridin-2-yl)amino group, N-(pyridin-3-yl)amino group, N-(pyridin-4-yl)amino group, N-(furan-2-yl)amino group, N-(furan-3-yl)amino group, N-(thiophen-2-yl)amino group, N-(thiophen-3-yl)amino group, pyrrolidino group, piperidino group, morpholino group, methyloxycarbonylamino group, or ethyloxycarbonylamino group,

AR is naphthalen-2-yl group, naphthalen-1-yl group, benzofuran-5-yl group, benzofuran-4-yl group, benzofuran-2-yl group, benzo[b]thiophen-5-yl group, benzo[b]thiophen-4-yl group, benzo[b]thiophen-2-yl group, indol-5-yl group, indol-4-yl group, indol-6-yl group, benzothiazol-6-yl group, benzothiazol-7-yl group, benzothiazol-5-yl group, benzothiazol-4-yl group, dihydro-3H-benzothiazol-6-yl group, dihydro-3H-benzothiazol-7-yl group, dihydro-3H-benzothiazol-5-yl group, dihydro-3H-benzothiazol-4-yl group, quinolin-6-yl group, quinolin-3-yl group, quinolin-5-yl group, quinolin-7-yl group, dihydro-1H-quinolin-6-yl group, dihydro-1H-quinolin-5-yl group, benzo[d]isothiazol-5-yl group, benzo[d]isothiazol-4-yl group, benzo[d]isothiazol-6-yl group, benzo[d]isothiazol-7-yl group, 1H-indazol-5-yl group, 1H-indazol-4-yl group, 1H-indazol-6-yl group, benzo[c]isothiazol-5-yl group, benzo[c]isothiazol-4-yl group, benzo[c]isothiazol-6-yl group, benzo[c]isothiazol-7-yl

group, 2H-indazol-5-yl group, 2H-indazol-4-yl group, 2H-indazol-6-yl group, imidazo[1,2-a]pyridin-6-yl group, imidazo[1,2-a]pyridin-7-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1H-pyrrolo[2,3-b]pyridin-4-yl group, isoquinolin-6-yl group, isoquinolin-3-yl group, isoquinolin-5-yl group, isoquinolin-7-yl group, dihydro-2H-isoquinolin-6-yl group, dihydro-2H-isoquinolin-5-yl group, cinnolin-6-yl group, cinnolin-5-yl group, quinazolin-6-yl group, quinazolin-7-yl group, quinazolin-5-yl group, quinoxalin-2-yl group, quinoxalin-6-yl group, quinoxalin-5-yl group, 1H-benzimidazol-5-yl group, 1H-benzimidazol-4-yl group, benzoxazol-5-yl group, benzoxazol-6-yl group, benzoxazol-4-yl group, benzoxazol-7-yl group, 1H-pyrrolo[3,2-b]pyridin-5-yl group, 1H-pyrrolo[3,2-b]pyridin-6-yl group, benzo[1,2,5]thiadiazol-5-yl group, benzo[1,2,5]thiadiazol-4-yl group, 1H-benzotriazol-5-yl group, 1H-benzotriazol-4-yl group, 1,3-dihydropyrrolo[2,3-b]pyridin-5-yl group, 1,3-dihydropyrrolo[2,3-b]pyridin-4-yl group, 1,3-dihydrobenzimidazol-5-yl group, 1,3-dihydrobenzimidazol-4-yl group, dihydro-3H-benzoxazol-6-yl group, dihydro-3H-benzoxazol-7-yl group, dihydro-3H-benzoxazol-5-yl group, dihydro-3H-benzoxazol-4-yl group, phthalazin-6-yl group, phthalazin-5-yl group, [1,8]naphthalidin-3-yl group, [1,8]naphthalidin-4-yl group, [1,5]naphthalidin-3-yl group, [1,5]naphthalidin-4-yl group, 1H-pyrrolo[3,2-c]pyridin-6-yl group, 1H-pyrrolo[3,2-c]pyridin-4-yl group, 1H-pyrazolo[4,3-b]pyridin-5-yl group, 1H-pyrazolo[4,3-b]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-4-yl group, 1H-pyrazolo[3,4-c]pyridin-5-yl group, 1H-pyrazolo[3,4-c]pyridin-4-yl group, 1H-pyrazolo[3,4-b]pyridin-5-yl group, 1H-pyrazolo[3,4-b]pyridin-4-yl group, [1,2,4]triazolo[4,3-a]pyridin-6-yl group, [1,2,4]triazolo[4,3-a]pyridin-7-yl group, thieno[3,2-c]pyridin-2-yl group, thieno[3,2-c]pyridin-3-yl group, thieno[3,2-c]pyridin-6-yl group, thieno[3,2-b]pyridin-2-yl group, thieno[3,2-b]pyridin-3-yl group, thieno[3,2-b]pyridin-5-yl group, thieno[3,2-

b]pyridin-6-yl group, 1H-thieno[3,2-c]pyrazol-5-yl group, 1H-thieno[3,2-c]pyrazol-4-yl group, benzo[d]isoxazol-5-yl group, benzo[d]isoxazol-4-yl group, benzo[d]isoxazol-6-yl group, benzo[d]isoxazol-7-yl group, benzo[c]isoxazol-5-yl group, benzo[c]isoxazol-4-yl group, benzo[c]isoxazol-6-yl group, benzo[c]isoxazol-7-yl group, indolizin-7-yl group, indolizin-6-yl group, indolizine-8-yl group, 1,3-dihydroindol-5-yl group, 1,3-dihydroindol-4-yl group, 1,3-dihydroindol-6-yl group, 1H-pyrazolo[3,4-d]thiazol-5-yl group, 2H-isoindol-5-yl group, 2H-isoindol-4-yl group, [1,2,4]triazolo[1,5-b]pyrimidin-6-yl group, 1H-pyrazolo[3,4-b]pyrazin-5-yl group, 1H-imidazo[4,5-b]pyrazin-5-yl group, 7H-purin-2-yl group, 4H-chromen-6-yl group, or 4H-chromen-5-yl group (the aforementioned groups may be substituted with one of Xa or two or more of the same or different Xa), Xa is oxo group, thioxo group, fluorine atom, chlorine atom, trifluoromethyl group, methyl group, ethyl group, propyl group, 2-hydroxyethyl group, carboxymethyl group, 2-carboxyethyl group, N,N-dimethylcarbamoylmethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, carboxymethoxy group, 2-carboxyethoxy group, N,N-dimethylcarbamoylmethoxy group, amino group, methylamino group, dimethylamino group, 2-hydroxyethylamino group, carbamoylamino group, acetylamino group, furan-2-carboxyamino group, 2-hydroxyacetylamino group, 2-aminoacetylamino group, methylsulfonylamino group, (N,N-dimethylsulfamoyl)amino group, methanesulfonyl group, sulfamoyl group, N-methylsulfamoyl group, N,N-dimethylsulfamoyl group, carboxyl group, acetyl group, carbamoyl group, or N,N-dimethylcarbamoyl group, and

Y is hydrogen atom, methyl group, or ethyl group.

(58-3) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), n is an integer of 2, AR binds to C³ in the aromatic ring (E), RS binds to C⁴ in the aromatic ring (E), C⁵ may be replaced with V, C² and C⁶ are unsubstituted ring-constituting carbon atoms, V is nitrogen atom or V is carbon

atom substituted with Zx, Zx is any one of fluorine atom, methyl group, hydroxyl group, amino group, N-methylamino group, or N,N-dimethylamino group,

Rs is -D-Rx, D is a single bond, Rx is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, phenyl group, 2-methylphenyl group, 3-methylphenyl group, 4-methylphenyl group, 2,3-dimethylphenyl group, 3,5-dimethylphenyl group, 2-methoxyphenyl group, 3-methoxyphenyl group, 4-methoxyphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, 2,3-difluorophenyl group, 2,4-difluorophenyl group, 2,5-difluorophenyl group, 3,4-difluorophenyl group, 2,3-dichlorophenyl group, 2,4-dichlorophenyl group, 2,5-dichlorophenyl group, 2,6-dichlorophenyl group, 3,4-dichlorophenyl group, 3,5-dichlorophenyl group, 2-trifluoromethylphenyl group, 3-trifluoromethylphenyl group, 4-trifluoromethylphenyl group, 4-(N,N-dimethylamino)phenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, furan-2-yl group, furan-3-yl group, thiophen-2-yl group, thiophen-3-yl group, pyridin-2-yl group, pyridin-3-yl group, pyridin-4-yl group, naphthalen-1-yl group, naphthalen-2-yl group, 1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group, biphenyl-2-yl group, biphenyl-3-yl group, biphenyl-4-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-

methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenoxyethyl group, 2-(2-chlorophenoxyethyl group, 2-(3-chlorophenoxyethyl group, 2-(4-chlorophenoxyethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, or 2-(N-ethyl-N-phenylamino)ethyl group;

AR is naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group, 2-methylbenzo[b]furan-5-yl group, 3-

methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group,
benzo[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-
methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-
indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-
dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-
5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group,
1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-
methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-
indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-
indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-
indol-5-yl group, 1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group, 1-(2-
hydroxyethyl)-3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1-(2-hydroxyethyl)-1H-
indol-5-yl group, benzothiazol-6-yl group, 2-methylbenzothiazol-6-yl group, 2-
methoxybenzothiazol-6-yl group, 2-aminobenzothiazol-6-yl group, 2-oxo-2,3-
dihydrobenzothiazol-6-yl group, 2-oxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group,
2-thioxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-3-methyl-2,3-
dihydrobenzothiazol-6-yl group, quinolin-3-yl group, quinolin-6-yl group, 2-oxo-1,2-
dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl group, 1H-indazol-5-yl group, 1-
methyl-1H-indazol-5-yl group, 1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-
5-yl group, 1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl
group, 3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-
yl group, imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-
methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl
group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-(2-hydroxyethyl)-1H-
pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, 1-oxo-1,2-
dihydroisoquinolin-6-yl group, cinnolin-6-yl group, or benzoxazol-5-yl group, and

Y is hydrogen atom, methyl group, or ethyl group.

(58-4) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), n is an integer of 2, AR binds to C³ in the aromatic ring (E), RS binds to C⁴ in the aromatic ring (E), C⁵ may be replaced with V, C² and C⁶ are unsubstituted ring constituting carbon atoms,

V is nitrogen atom or V is carbon atom substituted with Zx, Zx is any one of fluorine atom, methyl group, hydroxyl group, amino group, N-methylamino group, or N,N-dimethylamino group,

RS is -D-Rx, D is a single bond, Rx is phenyl group, 2-methylphenyl group, 3-methylphenyl group, 4-methylphenyl group, 2,3-dimethylphenyl group, 3,5-dimethylphenyl group, 2-methoxyphenyl group, 3-methoxyphenyl group, 4-methoxyphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, 2,3-difluorophenyl group, 2,4-difluorophenyl group, 2,5-difluorophenyl group, 3,4-difluorophenyl group, 2,3-dichlorophenyl group, 2,4-dichlorophenyl group, 2,5-dichlorophenyl group, 2,6-dichlorophenyl group, 3,4-dichlorophenyl group, 3,5-dichlorophenyl group, 2-trifluoromethylphenyl group, 3-trifluoromethylphenyl group, 4-trifluoromethylphenyl group, 4-(N,N-dimethylamino)phenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, furan-2-yl group, furan-3-yl group, thiophen-2-yl group, thiophen-3-yl group, pyridin-2-yl group, pyridin-3-yl group, pyridin-4-yl group, naphthalen-1-yl group, naphthalen-2-yl group, 1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1H-indazol-5-yl group, or 1-methyl-1H-indazol-5-yl group,

AR is naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group, 2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group, 1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group, 2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group, 2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group, quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group, 1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group, 1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group, 3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group, imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-

methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, 1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, or benzoxazol-5-yl group, and Y is hydrogen atom, methyl group, or ethyl group.

(58-5) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), n is an integer of 2, AR binds to C³ in the aromatic ring (E),

Rs binds to C⁴ in the aromatic ring (E), C², C⁵, and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is -D-Rx, D is a single bond, Rx is phenyl group, 2-methylphenyl group, 3-methylphenyl group, 4-methylphenyl group, 2,3-dimethylphenyl group, 3,5-dimethylphenyl group, 2-methoxyphenyl group, 3-methoxyphenyl group, 4-methoxyphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, 2,3-difluorophenyl group, 2,4-difluorophenyl group, 2,5-difluorophenyl group, 3,4-difluorophenyl group, 2,3-dichlorophenyl group, 2,4-dichlorophenyl group, 2,5-dichlorophenyl group, 2,6-dichlorophenyl group, 3,4-dichlorophenyl group, 3,5-dichlorophenyl group, 2-trifluoromethylphenyl group, 3-trifluoromethylphenyl group, 4-trifluoromethylphenyl group, 4-(N,N-dimethylamino)phenyl group, indan-2-yl group, furan-2-yl group, furan-3-yl group, thiophen-2-yl group, thiophen-3-yl group, pyridin-2-yl group, pyridin-3-yl group, pyridin-4-yl group, naphthalen-1-yl group, naphthalen-2-yl group, 1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1H-indazol-5-yl group, or 1-methyl-1H-indazol-5-yl group,

AR is naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl group, 6-(2-hydroxyethylamino)naphthalen-2-yl

group, benzo[b]furan-5-yl group, 2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group, 1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group, 2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group, 2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group, quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group, 1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group, 1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group, 3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group, imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, 1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, or benzoxazol-5-yl group, and Y

is hydrogen atom, methyl group, or ethyl group.

(59) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), n is an integer of 1 to 3,

C³ is carbon atom to which AR binds, C⁴ is carbon atom to which Rs binds, C⁵ may be replaced with V, C² and C⁶ are unsubstituted ring-constituting carbon atoms,

V is nitrogen atom, or carbon atom substituted with Zx, Zx is fluorine atom, chlorine atom, bromine atom, nitro group, methyl group, hydroxyl group, methoxy group, amino group, N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino group, N,N-dimethylamino group, N,N-diethylamino group, formylamino group, acetylamino group, carbamoylamino group, mesylamino group, or N,N-dimethylsulfamoylamino group,

Rs is -S-Rx, Rx is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-cyclopentylethyl group, or 2-cyclohexylethyl group, or Rb or Rc, Q in Rb is phenyl group, thienyl group, furyl group, pyridyl group, oxazolyl group, naphthyl group, tetrahydronaphthyl group, indanyl group, indolyl group, or dihydrobenzodioxyl group, A² is a single bond, oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)- (provided that when A² is oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)-, A¹ is ethylene), R² and R³ independently represent hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, dimethylamino group, acetylamino group, or methylsulfonylamino group (provided that when Q is phenyl group, A¹ is a single bond or unsubstituted methylene, and A² is a single bond, one of R² and R³ is a substituent other than hydrogen atom), p in Rc is an integer of 2 or 3, A⁴ is a single bond or methylene, A⁵ is -C(O)-, -C(S)-, or -S(O)₂-, Rd is hydrogen atom, or methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, cyclopropyl group,

cyclopropylmethyl group, cyclopentyl group, cyclopentylmethyl group, cyclohexyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, or pyridin-4-yl group, R₁ is methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, cyclopentylmethyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, phenylmethyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, pyridin-4-yl group, methoxy group, ethoxy group, propyloxy group, isopropyloxy group, butyloxy group, isobutyloxy group, t-butyloxy group, cyclopropyloxy group, cyclopentyloxy group, cyclohexyloxy group, cyclopentylmethoxy group, cyclohexylmethoxy group, phenoxy group, 4-methylphenoxy group, 4-chlorophenoxy group, 4-fluorophenoxy group, thiomethoxy group, amino group, N-methylamino group, N,N-dimethylamino group, N-ethylamino group, N,N-diethylamino group, N-propylamino group, N-isopropylamino group, N-butylamino group, N-isobutylamino group, N-t-butylamino group, N-cyclopropylamino group, N-cyclopentylamino group, N-cyclohexylamino group, N-phenylamino group, N-(4-methylphenyl)amino group, N-(4-chlorophenyl)amino group, N-(4-fluorophenyl)amino group, N-(pyridin-2-yl)amino group, N-(pyridin-3-yl)amino group, N-(pyridin-4-yl)amino group, N-(furan-2-yl)amino group, N-(furan-3-yl)amino group, N-(thiophen-2-yl)amino group, N-(thiophen-3-yl)amino group, pyrrolidino group, piperidino group, morpholino group, methyloxycarbonylamino group, or ethyloxycarbonylamino group,

AR is naphthalen-2-yl group, naphthalen-1-yl group, benzofuran-5-yl group, benzofuran-4-yl group, benzofuran-2-yl group, benzo[b]thiophen-5-yl group, benzo[b]thiophen-4-yl group, benzo[b]thiophen-2-yl group, indol-5-yl group, indol-4-

yl group, indol-6-yl group, benzothiazol-6-yl group, benzothiazol-7-yl group, benzothiazol-5-yl group, benzothiazol-4-yl group, dihydro-3H-benzothiazol-6-yl group, dihydro-3H-benzothiazol-7-yl group, dihydro-3H-benzothiazol-5-yl group, dihydro-3H-benzothiazol-4-yl group, quinolin-6-yl group, quinolin-3-yl group, quinolin-5-yl group, quinolin-7-yl group, dihydro-1H-quinolin-6-yl group, dihydro-1H-quinolin-5-yl group, benzo[d]isothiazol-5-yl group, benzo[d]isothiazol-4-yl group, benzo[d]isothiazol-6-yl group, benzo[d]isothiazol-7-yl group, 1H-indazol-5-yl group, 1H-indazol-4-yl group, 1H-indazol-6-yl group, benzo[c]isothiazol-5-yl group, benzo[c]isothiazol-4-yl group, benzo[cl]isothiazol-6-yl group, benzo[cl]isothiazol-7-yl group, 2H-indazol-5-yl group, 2H-indazol-4-yl group, 2H-indazol-6-yl group, imidazo[1,2-a]pyridin-6-yl group, imidazo[1,2-a]pyridin-7-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1H-pyrrolo[2,3-b]pyridin-4-yl group, isoquinolin-6-yl group, isoquinolin-3-yl group, isoquinolin-5-yl group, isoquinolin-7-yl group, dihydro-2H-isoquinolin-6-yl group, dihydro-2H-isoquinolin-5-yl group, cinnolin-6-yl group, cinnolin-5-yl group, quinazolin-6-yl group, quinazolin-7-yl group, quinazolin-5-yl group, quinoxalin-2-yl group, quinoxalin-6-yl group, quinoxalin-5-yl group, 1H-benzimidazol-5-yl group, 1H-benzimidazol-4-yl group, benzoxazol-5-yl group, benzoxazol-6-yl group, benzoxazol-4-yl group, benzoxazol-7-yl group, 1H-pyrrolo[3,2-b]pyridin-5-yl group, 1H-pyrrolo[3,2-b]pyridin-6-yl group, benzo[1,2,5]thiadiazol-5-yl group, benzo[1,2,5]thiadiazol-4-yl group, 1H-benzotriazol-5-yl group, 1H-benzotriazol-4-yl group, 1,3-dihydropyrrolo[2,3-b]pyridin-5-yl group, 1,3-dihydropyrrolo[2,3-b]pyridin-4-yl group, 1,3-dihydrobenzimidazol-5-yl group, 1,3-dihydrobenzimidazol-4-yl group, dihydro-3H-benzoxazol-6-yl group, dihydro-3H-benzoxazol-7-yl group, dihydro-3H-benzoxazol-5-yl group, dihydro-3H-benzoxazol-4-yl group, phthalazin-6-yl group, phthalazin-5-yl group, [1,8]naphthalidin-3-yl group, [1,8]naphthalidin-4-yl group, [1,5]naphthalidin-3-yl group, [1,5]naphthalidin-4-yl group, 1H-pyrrolo[3,2-

c]pyridin-6-yl group, 1H-pyrrolo[3,2-c]pyridin-4-yl group, 1H-pyrrolo[2,3-c]pyridin-5-yl group, 1H-pyrrolo[2,3-c]pyridin-4-yl group, 1H-pyrazolo[4,3-b]pyridin-5-yl group, 1H-pyrazolo[4,3-b]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-4-yl group, 1H-pyrazolo[3,4-c]pyridin-5-yl group, 1H-pyrazolo[3,4-b]pyridin-5-yl group, 1H-pyrazolo[3,4-b]pyridin-4-yl group, [1,2,4]triazolo[4,3-a]pyridin-6-yl group, [1,2,4]triazolo[4,3-a]pyridin-7-yl group, thieno[3,2-c]pyridin-2-yl group, thieno[3,2-c]pyridin-3-yl group, thieno[3,2-c]pyridin-6-yl group, thieno[3,2-b]pyridin-2-yl group, thieno[3,2-b]pyridin-3-yl group, thieno[3,2-b]pyridin-5-yl group, thieno[3,2-b]pyridin-6-yl group, 1H-thieno[3,2-c]pyrazol-5-yl group, 1H-thieno[3,2-c]pyrazol-4-yl group, benzo[d]isoxazol-5-yl group, benzo[d]isoxazol-4-yl group, benzo[d]isoxazol-6-yl group, benzo[d]isoxazol-7-yl group, benzo[c]isoxazol-4-yl group, benzo[c]isoxazol-6-yl group, benzo[c]isoxazol-7-yl group, indolizin-7-yl group, indolizin-6-yl group, indolizine-8-yl group, 1,3-dihydroindol-5-yl group, 1,3-dihydroindol-4-yl group, 1,3-dihydroindol-6-yl group, 1H-pyrazolo[3,4-d]thiazol-5-yl group, 2H-isoindol-5-yl group, 2H-isoindol-4-yl group, [1,2,4]triazolo[1,5-a]pyrimidin-6-yl group, 1H-pyrazolo[3,4-b]pyrazin-5-yl group, 1H-imidazo[4,5-b]pyrazin-5-yl group, 7H-purin-2-yl group, 4H-chromen-6-yl group, or 4H-chromen-5-yl group (the aforementioned groups may be substituted with one of Xa or two or more of the same or different Xa), Xa is oxo group, thioxo group, fluorine atom, chlorine atom, trifluoromethyl group, methyl group, ethyl group, propyl group, 2-hydroxyethyl group, carboxymethyl group, 2-carboxyethyl group, N,N-dimethylcarbamoylmethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, carboxymethoxy group, 2-carboxyethoxy group, N,N-dimethylcarbamoylmethoxy group, amino group, methylamino group, dimethylamino group, 2-hydroxyethylamino group, carbamoylaminogroup, acetylamino group, furan-2-carboxyamino group, 2-hydroxyacetylaminogroup, 2-

aminoacetyl amino group, methylsulfonylamino group, (N,N-dimethylsulfamoyl)amino group, methanesulfonyl group, sulfamoyl group, N-methylsulfamoyl group, N,N-dimethylsulfamoyl group, carboxyl group, acetyl group, carbamoyl group, or N,N-dimethylcarbamoyl group, and

Y is hydrogen atom, methyl group, or ethyl group.

(59-2) The compound or salt thereof according to (1) mentioned above, wherein, in the formula (I), AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ is a ring-constituting carbon atom substituted with Zx, or an unsubstituted ring-constituting carbon atom, C² and C⁶ are unsubstituted ring-constituting carbon atoms, and Rs is -N(Ry)(Rz).

(59-3) The compound or salt thereof according to (1) mentioned above, wherein, in the formula (I), AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ is nitrogen atom, C² and C⁶ are unsubstituted ring-constituting carbon atoms, and Rs is -N(Ry)(Rz).

(60) The compound or salt thereof according to (59-2) or (59-3) mentioned above, wherein, in the formula (I), Link is -(CH₂)_n- , n is an integer of 2, and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

(61) The compound or salt thereof according to (4) mentioned above, wherein, in the formula (I), Link is -(CH₂)_n- , n is an integer of 2, AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ is a ring-constituting carbon atom substituted with Zx, or an unsubstituted ring-constituting carbon atom, C² and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is -N(Ry)(Rz), and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

(61-2) The compound or salt thereof according to (4) mentioned above, wherein, in the formula (I), Link is -(CH₂)_n- , n is an integer of 2, AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ is nitrogen atom, C² and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is -N(Ry)(Rz), and Y is hydrogen

atom or a lower alkyl group having 1 to 4 carbon atoms.

(62) The compound or salt thereof according to (5) mentioned above, wherein, in the formula (I), Link is -(CH₂)_n, n is an integer of 2, AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ is a ring-constituting carbon atom substituted with Zx, or an unsubstituted ring-constituting carbon atom, C² and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is -N(Ry)(Rz), and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

(62-2) The compound or salt thereof according to (5) mentioned above, wherein, in the formula (I), Link is -(CH₂)_n, n is an integer of 2, AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ is nitrogen atom, C² and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is -N(Ry)(Rz), and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

(63) The compound or salt thereof according to any one of (59-2) to (62-2) mentioned above, wherein, in the formula (I), Xa which may substitute on AR is methyl group, ethyl group, propyl group, hydroxyethyl group, carboxymethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, amino group, methylamino group, dimethylamino group, carboxyl group, carbamoyl group, acetyl group, methanesulfonyl group, sulfamoyl group, or N,N-dimethylsulfamoyl group.

(64) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), n is an integer of 1 to 3, C³ is carbon atom to which AR binds, C⁴ is carbon atom to which Rs binds, C², C⁵, and C⁶ are unsubstituted ring-constituting carbon atoms,

Rs is -N(Ry)(Rz), Rz is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-

methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-dichlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group,

2-phenoxyethyl group, 2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group, 2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, 2-(N-ethyl-N-phenylamino)ethyl group, isobutyryl group, isopropylthiocarbonyl group, isopropylsulfonyl group, valeryl group, butylthiocarbonyl group, isovaleryl group, isobutylthiocarbonyl group, pivaloyl group, t-butytlthiocarbonyl group, cyclopropylcarbonyl group, cyclopropylthiocarbonyl group, cyclopentylcarbonyl group, cyclopentylthiocarbonyl group, cyclohexylcarbonyl group, cyclohexylthiocarbonyl group, cyclopentylmethylcarbonyl group, cyclopentylmethylthiocarbonyl group, cyclohexylmethylcarbonyl group, cyclohexylmethylthiocarbonyl group, benzoyl group, thiobenzoyl group, phenylsulfonyl group, 4-methylphenylcarbonyl group, 4-methylphenylthiocarbonyl group, 4-methylphenylsulfonyl group, 4-chlorophenylcarbonyl group, 4-chlorophenylthiocarbonyl group, 4-fluorophenylcarbonyl group, 4-fluorophenylthiocarbonyl group, isopropoxy carbonyl group, N-isopropylcarbamoyl group, N-isopropylthiocarbamoyl group, butyloxycarbonyl group, N-butyloxycarbamoyl group, N-butylthiocarbamoyl group, isobutyloxycarbonyl group, N-isobutyloxycarbamoyl group, N-isobutylthiocarbamoyl group, t-butyloxycarbonyl group, N-t-butyloxycarbamoyl group, N-t-butyloxycarbonyl group, cyclopropylcarbonyl group, N-cyclopropylthiocarbamoyl group, cyclopentylcarbonyl group, N-cyclopentylthiocarbamoyl group, N-cyclopentylthiocarbamoyl group, cyclohexylcarbonyl group, N-cyclohexylthiocarbamoyl group, cyclopentylmethoxy carbonyl group, cyclohexylmethoxy carbonyl group, phenoxy carbonyl group, N-phenylcarbamoyl group, N-phenylthiocarbamoyl group, 4-methylphenoxy carbonyl group, N-(4-methylphenyl)carbamoyl group, N-(4-methylphenyl)thiocarbamoyl group, 4-chlorophenoxy carbonyl group, N-(4-

chlorophenyl)carbamoyl group, N-(4-chlorophenyl)thiocarbamoyl group, 4-fluorophenoxy carbonyl group, N-(4-fluorophenyl)carbamoyl group, N-(4-fluorophenyl)thiocarbamoyl group, (pyrrolidino-1-yl)carbonyl group, (piperidino-1-yl)carbonyl group, or (morpholino-4-yl)carbonyl group, Ry is hydrogen atom, methyl group, ethyl group or isobutyl group, or binds to Rz to form pyrrolidino group, piperidino group, piperazino group, morpholino group, pyrrol-1-yl group, imidazol-1-yl group, or pyrazol-1-yl group together with the nitrogen atom to which they bind,

AR is naphthalen-2-yl group, naphthalen-1-yl group, benzofuran-5-yl group, benzofuran-4-yl group, benzofuran-2-yl group, benzo[b]thiophen-5-yl group, benzo[b]thiophen-4-yl group, benzo[b]thiophen-2-yl group, indol-5-yl group, indol-4-yl group, indol-6-yl group, benzothiazol-6-yl group, benzothiazol-7-yl group, benzothiazol-5-yl group, benzothiazol-4-yl group, dihydro-3H-benzothiazol-6-yl group, dihydro-3H-benzothiazol-7-yl group, dihydro-3H-benzothiazol-5-yl group, dihydro-3H-benzothiazol-4-yl group, quinolin-6-yl group, quinolin-3-yl group, quinolin-5-yl group, quinolin-7-yl group, dihydro-1H-quinolin-6-yl group, dihydro-1H-quinolin-5-yl group, benzo[d]isothiazol-5-yl group, benzo[d]isothiazol-4-yl group, benzo[d]isothiazol-6-yl group, benzo[d]isothiazol-7-yl group, 1H-indazol-5-yl group, 1H-indazol-4-yl group, 1H-indazol-6-yl group, benzo[c]isothiazol-5-yl group, benzo[c]isothiazol-4-yl group, benzo[c]isothiazol-6-yl group, benzo[c]isothiazol-7-yl group, 2H-indazol-5-yl group, 2H-indazol-4-yl group, 2H-indazol-6-yl group, imidazo[1,2-a]pyridin-6-yl group, imidazo[1,2-a]pyridin-7-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1H-pyrrolo[2,3-b]pyridin-4-yl group, isoquinolin-6-yl group, isoquinolin-3-yl group, isoquinolin-5-yl group, isoquinolin-7-yl group, dihydro-2H-isoquinolin-5-yl group, cinnolin-6-yl group, cinnolin-5-yl group, quinazolin-6-yl group, quinazolin-7-yl group, quinazolin-5-yl group, quinoxalin-2-yl group, quinoxalin-6-yl group, quinoxalin-5-yl group, 1H-

benzimidazol-5-yl group, 1H-benzimidazol-4-yl group, benzoxazol-5-yl group, benzoxazol-6-yl group, benzoxazol-4-yl group, benzoxazol-7-yl group, 1H-pyrrolo[3,2-b]pyridin-5-yl group, 1H-pyrrolo[3,2-b]pyridin-6-yl group, benzo[1,2,5]thiadiazol-5-yl group, benzo[1,2,5]thiadiazol-4-yl group, 1H-benzotriazol-5-yl group, 1H-benzotriazol-4-yl group, 1,3-dihydropyrrolo[2,3-b]pyridin-5-yl group, 1,3-dihydropyrrolo[2,3-b]pyridin-4-yl group, 1,3-dihydrobenzimidazol-5-yl group, 1,3-dihydrobenzimidazol-4-yl group, dihydro-3H-benzoxazol-6-yl group, dihydro-3H-benzoxazol-7-yl group, dihydro-3H-benzoxazol-5-yl group, dihydro-3H-benzoxazol-4-yl group, phthalazin-6-yl group, phthalazin-5-yl group, [1,8]naphthalidin-3-yl group, [1,8]naphthalidin-4-yl group, [1,5]naphthalidin-3-yl group, [1,5]naphthalidin-4-yl group, 1H-pyrrolo[3,2-c]pyridin-6-yl group, 1H-pyrrolo[3,2-c]pyridin-4-yl group, 1H-pyrrolo[2,3-c]pyridin-5-yl group, 1H-pyrrolo[2,3-c]pyridin-4-yl group, 1H-pyrazolo[4,3-b]pyridin-5-yl group, 1H-pyrazolo[4,3-b]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-4-yl group, 1H-pyrazolo[3,4-c]pyridin-5-yl group, 1H-pyrazolo[3,4-c]pyridin-4-yl group, 1H-pyrazolo[3,4-b]pyridin-5-yl group, 1H-pyrazolo[3,4-b]pyridin-4-yl group, [1,2,4]triazolo[4,3-a]pyridin-6-yl group, [1,2,4]triazolo[4,3-a]pyridin-7-yl group, thieno[3,2-c]pyridin-2-yl group, thieno[3,2-c]pyridin-3-yl group, thieno[3,2-c]pyridin-6-yl group, thieno[3,2-b]pyridin-2-yl group, thieno[3,2-b]pyridin-3-yl group, thieno[3,2-b]pyridin-5-yl group, 1H-thieno[3,2-c]pyrazol-4-yl group, benzo[d]isoxazol-5-yl group, benzo[d]isoxazol-4-yl group, benzo[d]isoxazol-6-yl group, benzo[c]isoxazol-5-yl group, benzo[c]isoxazol-4-yl group, benzo[c]isoxazol-6-yl group, benzo[cl]isoxazol-7-yl group, indolizin-7-yl group, indolizin-6-yl group, indolizine-8-yl group, 1,3-dihydroindol-5-yl group, 1,3-dihydroindol-4-yl group, 1,3-dihydroindol-6-yl group, 1H-pyrazolo[3,4-d]thiazol-5-yl group, 2H-isoindol-5-yl group, 2H-isoindol-4-yl group,

[1,2,4]triazolo[1,5-a]pyrimidin-6-yl group, 1H-pyrazolo[3,4-b]pyrazin-5-yl group, 1H-imidazo[4,5-b]pyrazin-5-yl group, 7H-purin-2-yl group, 4H-chromen-6-yl group, or 4H-chromen-5-yl group (these groups may be substituted with one of Xa or two or more of the same or different Xa),

Xa represents oxo group, thioxo group, fluorine atom, chlorine atom, trifluoromethyl group, methyl group, ethyl group, propyl group, 2-hydroxyethyl group, carboxymethyl group, 2-carboxyethyl group, N,N-dimethylcarbamoylmethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, carboxymethoxy group, 2-carboxyethoxy group, N,N-dimethylcarbamoylmethoxy group, amino group, methylamino group, dimethylamino group, 2-hydroxyethylamino group, carbamoylamino group, acetylamino group, furan-2-carboxyamino group, 2-hydroxyacetylamino group, 2-aminoacetylamino group, methylsulfonylamino group, (N,N-dimethylsulfamoyl)amino group, methanesulfonyl group, sulfamoyl group, N-methylsulfamoyl group, N,N-dimethylsulfamoyl group, carboxyl group, acetyl group, carbamoyl group, or N,N-dimethylcarbamoyl group, and

Y is hydrogen atom, methyl group, or ethyl group.

(65) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), n is an integer of 2,

C⁸ is carbon atom to which AR binds, C⁴ is carbon atom to which Rs binds, C², C⁶ and C⁸ are unsubstituted ring-constituting carbon atoms,

Rs is -N(Ry)(Rz), Rz is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group,

4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group, 2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl

group, 2-(N-phenyl-N-methylamino)ethyl group, 2-(N-ethyl-N-phenylamino)ethyl group, isobutyryl group, isopropylthiocarbonyl group, isopropylsulfonyl group, valeryl group, butylthiocarbonyl group, isovaleryl group, isobutylthiocarbonyl group, pivaloyl group, t-butylthiocarbonyl group, cyclopropylcarbonyl group, cyclopropylthiocarbonyl group, cyclopentylcarbonyl group, cyclopentylthiocarbonyl group, cyclohexylcarbonyl group, cyclohexylthiocarbonyl group, cyclopentylmethylcarbonyl group, cyclopentylmethylthiocarbonyl group, cyclohexylmethylcarbonyl group, cyclohexylmethylthiocarbonyl group, benzoyl group, thiobenzoyl group, phenylsulfonyl group, 4-methylphenylcarbonyl group, 4-methylphenylthiocarbonyl group, 4-methylphenylsulfonyl group, 4-chlorophenylcarbonyl group, 4-chlorophenylthiocarbonyl group, 4-fluorophenylcarbonyl group, 4-fluorophenylthiocarbonyl group, isopropoxy carbonyl group, N-isopropylcarbamoyl group, N-isopropylthiocarbamoyl group, butyloxycarbonyl group, N-butyloxycarbonyl group, N-butyloxycarbonyl group, isobutyloxycarbonyl group, N-isobutyloxycarbonyl group, N-isobutyloxycarbonyl group, N-isobutylthiocarbamoyl group, t-butyloxycarbonyl group, N-t-butyloxycarbonyl group, N-t-butyloxycarbonyl group, N-t-butyloxycarbonyl group, cyclopropoxycarbonyl group, N-cyclopropylcarbamoyl group, cyclopentoxycarbonyl group, N-cyclopentylcarbamoyl group, N-cyclopentylthiocarbamoyl group, cyclohexyloxycarbonyl group, N-cyclohexylcarbamoyl group, N-cyclohexylthiocarbamoyl group, cyclopentylmethyloxycarbonyl group, cyclohexylmethyloxycarbonyl group, phenoxy carbonyl group, N-phenylcarbamoyl group, N-phenylthiocarbamoyl group, 4-methylphenoxy carbonyl group, N-(4-methylphenyl)carbamoyl group, N-(4-methylphenyl)thiocarbamoyl group, 4-chlorophenoxy carbonyl group, N-(4-chlorophenyl)carbamoyl group, N-(4-chlorophenyl)thiocarbamoyl group, 4-fluorophenoxy carbonyl group, N-(4-fluorophenyl)carbamoyl group, N-(4-

fluorophenyl)thiocarbamoyl group, (pyrrolidino-1-yl)carbonyl group, (piperidino-1-yl)carbonyl group, or (morpholino-4-yl)carbonyl group, Ry is hydrogen atom, methyl group, ethyl group or isobutyl group, or binds to Rz to form pyrrolidino group, piperidino group, or morpholino group together with the nitrogen atom to which they bind,

AR is naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group, 2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group, 1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group, 2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group, 2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group, quinolin-6-yl group, 2-oxo-1,2-dihydrobenzothiazol-6-yl group,

dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group, 1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group, 1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group, 3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group, imidazo[1,2-al]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, 1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, or benzoxazol-5-yl group, and Y is hydrogen atom, methyl group, or ethyl group.

(65-2) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), Link is -(CH₂)_n, n is an integer of 2,

C³ is carbon atom to which AR binds, C⁴ is carbon atom to which Rs binds, C², C⁵ and C⁶ are unsubstituted ring-constituting carbon atoms,

Rs is -N(Ry)(Rz), and the group represented by -N(Ry)(Rz) is N,N-dimethylamino group, N-ethyl-N-methylamino group, N,N-diethylamino group, N-methyl-N-propylamino group, N-ethyl-N-propylamino group, N-isopropyl-N-methylamino group, N-ethyl-N-isopropylamino group, N-butylamino group, N-butyl-N-methylamino group, N-butyl-N-ethylamino group, N-isobutylamino group, N-isobutyl-N-methylamino group, N-ethyl-N-isobutylamino group, N-(2-ethylbutyl)amino group, N-(2-ethylbutyl)-N-methylamino group, N-cyclopentylamino group, N-cyclopentyl-N-methylamino group, N-cyclohexylamino group, N-cyclohexyl-N-methylamino group, N-cycloheptyl-amino group, N-(cyclopentylmethyl)amino group, N-(cyclopentylmethyl)-N-methylamino group, N-(cyclohexylmethyl)amino group, N-(cyclohexylmethyl)-N-methylamino group, N-(2-methylphenyl)amino group, N-(4-methylphenyl)amino group, N-(2-fluorophenyl)amino group, N-(3-fluorophenyl)amino group, N-(4-fluorophenyl)amino

group, N-(2-chlorophenyl)amino group, N-(3-chlorophenyl)amino group, N-(4-chlorophenyl)amino group, N-(indan-2-yl)amino group, N-(1-phenylethyl)amino group, N-[1-(2-fluorophenyl)ethyl]amino group, N-[1-(3-fluorophenyl)ethyl]amino group, N-[1-(4-fluorophenyl)ethyl]amino group, N-[1-(2-chlorophenyl)ethyl]amino group, N-[1-(3-chlorophenyl)ethyl]amino group, N-[1-(4-chlorophenyl)ethyl]amino group, N-(2-methylphenylmethyl)amino group, N-methyl-N-(2-methylphenylmethyl)amino group, N-(3-methylphenylmethyl)amino group, N-methyl-N-(3-methylphenylmethyl)amino group, N-(4-methylphenylmethyl)amino group, N-methyl-N-(4-methylphenylmethyl)amino group, N-(2-fluorophenylmethyl)amino group, N-(2-fluorophenylmethyl)-N-methylamino group, N-(3-fluorophenylmethyl)amino group, N-(3-fluorophenylmethyl)-N-methylamino group, N-(4-fluorophenylmethyl)amino group, N-(4-fluorophenylmethyl)-N-methylamino group, N-(2-chlorophenylmethyl)amino group, N-(2-chlorophenylmethyl)-N-methylamino group, N-(3-chlorophenylmethyl)amino group, N-(4-chlorophenylmethyl)amino group, N-(4-chlorophenylmethyl)-N-methylamino group, N-(2,3-difluorophenylmethyl)amino group, N-(2,3-difluorophenylmethyl)-N-methylamino group, N-(2,4-difluorophenylmethyl)amino group, N-(2,4-difluorophenylmethyl)-N-methylamino group, N-(2,5-difluorophenylmethyl)amino group, N-(2,5-difluorophenylmethyl)-N-methylamino group, N-(3,4-difluorophenylmethyl)amino group, N-(3,4-difluorophenylmethyl)-N-methylamino group, N-(3,5-difluorophenylmethyl)amino group, N-(3,5-difluorophenylmethyl)-N-methylamino group, N-(2,3-dichlorophenylmethyl)amino group, N-(2,3-dichlorophenylmethyl)-N-methylamino group, N-(2,4-dichlorophenylmethyl)amino group, N-(2,4-dichlorophenylmethyl)-N-methylamino group, N-(2,5-dichlorophenylmethyl)amino group, N-(2,5-dichlorophenylmethyl)-N-methylamino group, N-(2,6-dichlorophenylmethyl)amino group, N-(2,6-dichlorophenylmethyl)-N-methylamino

group, N-(3,4-dichlorophenylmethyl)amino group, N-(3,4-dichlorophenylmethyl)-N-methylamino group, N-(3,5-dichlorophenylmethyl)amino group, N-(3,5-dichlorophenylmethyl)-N-methylamino group, N-[2-(trifluoromethyl)phenylmethyl]amino group, N-methyl-N-[2-(trifluoromethyl)phenylmethyl]amino group, N-[3-(trifluoromethyl)phenylmethyl]amino group, N-methyl-N-[3-(trifluoromethyl)phenylmethyl]amino group, N-[4-(trifluoromethyl)phenylmethyl]amino group, N-methyl-N-[4-(trifluoromethyl)phenylmethyl]amino group, 1-pyrrolidino group, 1-(4-methylpiperidino) group, 1-homopiperidino group, or 4-morpholino group,

AR is naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-amino naphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group, 2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group, 1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1-(2-hydroxyethyl)-1H-

indol-5-yl group, benzothiazol-6-yl group, 2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group, 2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group, 2-oxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group, quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group, 1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group, 1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group, 3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group, imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, 1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, or benzoxazol-5-yl group, and

Y is hydrogen atom, methyl group, or ethyl group.

(65-3) The compound or salt thereof according to (1) mentioned above, wherein, in the formula (I), Link is -(CH₂)_n, n is an integer of 2,

C³ is carbon atom to which AR binds, C⁴ is carbon atom to which Rs binds, C⁵ is nitrogen atom, C² and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is -N(Ry)(Rz), and the group represented by -N(Ry)(Rz) is N,N-dimethylamino group, N-ethyl-N-methylamino group, N,N-diethylamino group, N-methyl-N-propylamino group, N-ethyl-N-propylamino group, N-isopropyl-N-methylamino group, N-ethyl-N-isopropylamino group, N-butylamino group, N-butyl-N-methylamino group, N-butyl-N-ethylamino group, N-isobutylamino group, N-isobutyl-N-methylamino group, N-ethyl-N-isobutylamino group, N-(2-ethylbutyl)amino group, N-(2-ethylbutyl)-N-methylamino group, N-cyclopentylamino group, N-cyclopentyl-N-methylamino group, N-cyclohexylamino

group, N-cyclohexyl-N-methylamino group, N-cycloheptylaminogroup, N-(cyclopentylmethyl)amino group, N-(cyclopentylmethyl)-N-methylamino group, N-(cyclohexylmethyl)amino group, N-(cyclohexylmethyl)-N-methylamino group, N-(2-methylphenyl)amino group, N-(4-methylphenyl)amino group, N-(2-fluorophenyl)amino group, N-(3-fluorophenyl)amino group, N-(4-fluorophenyl)amino group, N-(2-chlorophenyl)amino group, N-(3-chlorophenyl)amino group, N-(4-chlorophenyl)amino group, N-(indan-2-yl)amino group, N-(1-phenylethyl)amino group, N-[1-(2-fluorophenyl)ethyl]amino group, N-[1-(3-fluorophenyl)ethyl]amino group, N-[1-(4-fluorophenyl)ethyl]amino group, N-[1-(2-chlorophenyl)ethyl]amino group, N-[1-(3-chlorophenyl)ethyl]amino group, N-[1-(4-chlorophenyl)ethyl]amino group, N-(2-methylphenylmethyl)amino group, N-methyl-N-(2-methylphenylmethyl)amino group, N-(3-methylphenylmethyl)amino group, N-methyl-N-(3-methylphenylmethyl)amino group, N-(4-methylphenylmethyl)amino group, N-methyl-N-(4-methylphenylmethyl)amino group, N-(2-fluorophenylmethyl)amino group, N-(2-fluorophenylmethyl)-N-methylamino group, N-(3-fluorophenylmethyl)amino group, N-(3-fluorophenylmethyl)-N-methylamino group, N-(4-fluorophenylmethyl)amino group, N-(4-fluorophenylmethyl)-N-methylamino group, N-(2-chlorophenylmethyl)amino group, N-(2-chlorophenylmethyl)-N-methylamino group, N-(3-chlorophenylmethyl)-N-methylamino group, N-(4-chlorophenylmethyl)amino group, N-(4-chlorophenylmethyl)-N-methylamino group, N-(2,3-difluorophenylmethyl)amino group, N-(2,3-difluorophenylmethyl)-N-methylamino group, N-(2,4-difluorophenylmethyl)amino group, N-(2,4-difluorophenylmethyl)-N-methylamino group, N-(2,5-difluorophenylmethyl)amino group, N-(2,5-difluorophenylmethyl)-N-methylamino group, N-(3,4-difluorophenylmethyl)amino group, N-(3,4-difluorophenylmethyl)-N-methylamino group, N-(3,5-difluorophenylmethyl)amino group, N-(3,5-difluorophenylmethyl)-N-methylamino group.

group, N-(2,3-dichlorophenylmethyl)amino group, N-(2,3-dichlorophenylmethyl)-N-methylamino group, N-(2,4-dichlorophenylmethyl)amino group, N-(2,4-dichlorophenylmethyl)-N-methylamino group, N-(2,5-dichlorophenylmethyl)amino group, N-(2,5-dichlorophenylmethyl)-N-methylamino group, N-(2,6-dichlorophenylmethyl)amino group, N-(2,6-dichlorophenylmethyl)-N-methylamino group, N-(3,4-dichlorophenylmethyl)amino group, N-(3,4-dichlorophenylmethyl)-N-methylamino group, N-(3,5-dichlorophenylmethyl)amino group, N-(3,5-dichlorophenylmethyl)-N-methylamino group, N-[2-(trifluoromethyl)phenylmethyl]amino group, N-methyl-N-[2-(trifluoromethyl)phenylmethyl]amino group, N-[3-(trifluoromethyl)phenylmethyl]amino group, N-methyl-N-[3-(trifluoromethyl)phenylmethyl]amino group, N-[4-(trifluoromethyl)phenylmethyl]amino group, N-methyl-N-[4-(trifluoromethyl)phenylmethyl]amino group, 1-pyrrolidino group, 1-(4-methylpiperidino) group, 1-homopiperidino group, or 4-morpholino group,
AR is naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-amino(naphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group, 2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-

methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group, 1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group, 2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group, 2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group, 2-oxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group, quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group, 1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group, 1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group, 3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group, imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, 1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, or benzoxazol-5-yl group, and

Y is hydrogen atom, methyl group, or ethyl group.

(66) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), n is an integer of 2, AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ is carbon atom substituted with N(Rn¹)(Rn²) (provided that one of Rn¹ and Rn² is a substituent other than hydrogen atom), C² and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is -O-Rx, and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

(67) The compound or salt thereof according to (4) mentioned above, wherein, in the formula (I), Link is $-(\text{CH}_2)_n-$, n is an integer of 2, AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ is carbon atom substituted with $\cdot\text{N}(\text{Rn}^1)(\text{Rn}^2)$ (provided that one of Rn¹ and Rn² is a substituent other than hydrogen atom), C² and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is $\cdot\text{O}\text{-Rx}$, and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

(68) The compound or salt thereof according to (5) mentioned above, wherein, in the formula (I), Link is $-(\text{CH}_2)_n-$, n is an integer of 2, AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ is carbon atom substituted with $\cdot\text{N}(\text{Rn}^1)(\text{Rn}^2)$ (provided that one of Rn¹ and Rn² is a substituent other than hydrogen atom), C² and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is $\cdot\text{O}\text{-Rx}$, and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

(69) The compound or salt thereof according to any one of (66) to (68) mentioned above, wherein, in the formula (I), Xa which may substitute on AR is methyl group, ethyl group, propyl group, hydroxyethyl group, carboxymethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, amino group, methylamino group, dimethylamino group, carboxyl group, carbamoyl group, acetyl group, methanesulfonyl group, sulfamoyl group, or N,N-dimethylsulfamoyl group.

(70) The compound or salt thereof according to any one of (66) to (69) mentioned above, wherein, in the formula (I), Rs is $\cdot\text{O}\text{-Rx}$, Rx is a group selected from butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, and cyclohexylmethyl group, or Rb (provided that Q in Rb is phenyl group or indan-2-yl group), A¹ is a single bond, or methylene group substituted with methyl group or ethyl group or unsubstituted methylene group, or ethylene group substituted with methyl group or ethyl group or unsubstituted ethylene group, A² represents a single bond, oxygen atom, sulfur atom, $\cdot\text{N}(\text{methyl})\cdot$, or $\cdot\text{N}(\text{ethyl})\cdot$ (provided that when A² is oxygen atom, sulfur atom,

$\cdot N(methyl)\cdot$, or $\cdot N(ethyl)\cdot$, A^1 is ethylene), and R^2 and R^3 independently represent hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, or dimethylamino group (provided that when Q is phenyl group, A^1 is a single bond or unsubstituted methylene, and A^2 is a single bond, one of R^2 and R^3 is a substituent other than hydrogen atom).

(71) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), n is an integer of 2,

C^3 is carbon atom to which AR binds, C^4 is carbon atom to which Rs binds, C^5 is carbon atom substituted with Zx , C^2 and C^6 are unsubstituted ring constituting carbon atoms,

Zx is N -methylamino group, N -ethylamino group, N -propylamino group, N -isopropylamino group, N,N -dimethylamino group, N,N -diethylamino group, formylamino group, acetylamino group, carbamoylamino group, mesylamino group, or N,N -dimethylsulfamoylamino group,

Rs is $\cdot O\cdot Rx$, Rx is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl

group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group, 2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, or 2-(N-ethyl-N-phenylamino)ethyl group,

AR is naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl group, 6-(2-hydroxyethylamino)naphthalen-2-yl

group, benzo[b]furan-5-yl group, 2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group, 1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group, 2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group, 2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group, quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group, 1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group, 1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group, 3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group, imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, 1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, or benzoxazol-5-yl group, and

Y is hydrogen atom, methyl group, or ethyl group.

(72) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), n is an integer of 2, AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ is a ring-constituting carbon atom substituted with Zx, or an unsubstituted ring-constituting carbon atom, C² and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is ·D·Rc, D is oxygen atom or sulfur atom, and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

(73) The compound or salt thereof according to (4) mentioned above, wherein, in the formula (I), Link is -(CH₂)_n-, n is an integer of 2, AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ is a ring-constituting carbon atom substituted with Zx, or an unsubstituted ring-constituting carbon atom, C² and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is ·O·Rc, and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

(74) The compound or salt thereof according to (5) mentioned above, wherein, in the formula (I), Link is -(CH₂)_n-, n is an integer of 2, AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ is a ring-constituting carbon atom substituted with Zx, or an unsubstituted ring-constituting carbon atom, C² and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is ·O·Rc, and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

(75) The compound or salt thereof according to any one of (72) to (74) mentioned above, wherein, in the formula (I), Xa which may substitute on AR is methyl group, ethyl group, propyl group, hydroxyethyl group, carboxymethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, amino group, methylamino group, dimethylamino group, carboxyl group, carbamoyl group, acetyl group, methanesulfonyl group, sulfamoyl group, or N,N-dimethylsulfamoyl group.

(76) The compound or salt thereof according to (1-2) mentioned above, wherein, in

the formula (I), n is an integer of 1 to 3,

C³ is carbon atom to which AR binds, C⁴ is carbon atom to which Rs binds, C⁵ may be replaced with V, C² and C⁶ are unsubstituted ring-constituting carbon atoms,

V is nitrogen atom, or carbon atom substituted with Zx, Zx is fluorine atom, chlorine atom, bromine atom, nitro group, methyl group, hydroxyl group, methoxy group, amino group, N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino group, N,N-dimethylamino group, N,N-diethylamino group, formylamino group, acetylamino group, carbamoylamino group, mesylamino group, or N,N-dimethylsulfamoylamino group,

Rs is -D-Rc, D is oxygen atom or sulfur atom, p in Rc is an integer of 2 or 3, A⁴ is a single bond or methylene, A⁵ is -C(O)-, -C(S)-, or -S(O)₂-, Rd is hydrogen atom, or methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, cyclopropyl group, cyclopropylmethyl group, cyclopentyl group, cyclopentylmethyl group, cyclohexyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, or pyridin-4-yl group, Re is methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, cyclopentylmethyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, phenylmethyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, pyridin-4-yl group, furan-2-yl group, furan-3-yl group, thiophen-2-yl group, thiophen-3-yl group, methoxy group, ethoxy group, propyloxy group, isopropyloxy group, butyloxy group, isobutyloxy group, t-butyloxy group, cyclopropyloxy group, cyclopentyloxy group, cyclohexyloxy group, cyclopentylmethoxy group, cyclohexylmethoxy group, phenoxy group, 4-

methylphenyloxy group, 4-chlorophenyloxy group, 4-fluorophenyloxy group, thiomethoxy group, amino group, N-methylamino group, N,N-dimethylamino group, N-ethylamino group, N,N-diethylamino group, N-propylamino group, N-isopropylamino group, N-butylamino group, N-isobutylamino group, N-t-butylamino group, N-cyclopropylamino group, N-cyclopentylamino group, N-cyclohexylamino group, N-phenylamino group, N-(4-methylphenyl)amino group, N-(4-chlorophenyl)amino group, N-(4-fluorophenyl)amino group, N-(pyridin-2-yl)amino group, N-(pyridin-3-yl)amino group, N-(pyridin-4-yl)amino group, N-(furan-2-yl)amino group, N-(furan-3-yl)amino group, N-(thiophen-2-yl)amino group, N-(thiophen-3-yl)amino group, pyrrolidino group, piperidino group, morpholino group, methyloxycarbonylamino group, or ethyloxycarbonylamino group,

AR is naphthalen-2-yl group, naphthalen-1-yl group, benzofuran-5-yl group, benzofuran-4-yl group, benzofuran-2-yl group, benzo[b]thiophen-5-yl group, benzo[b]thiophen-4-yl group, benzo[bl]thiophen-2-yl group, indol-5-yl group, indol-4-yl group, indol-6-yl group, benzothiazol-6-yl group, benzothiazol-7-yl group, benzothiazol-5-yl group, benzothiazol-4-yl group, dihydro-3H-benzothiazol-6-yl group, dihydro-3H-benzothiazol-7-yl group, dihydro-3H-benzothiazol-5-yl group, dihydro-3H-benzothiazol-4-yl group, quinolin-6-yl group, quinolin-3-yl group, quinolin-5-yl group, quinolin-7-yl group, dihydro-1H-quinolin-6-yl group, dihydro-1H-quinolin-5-yl group, benzod]isothiazol-5-yl group, benzo[d]isothiazol-4-yl group, benzo[d]isothiazol-6-yl group, benzo[d]isothiazol-7-yl group, 1H-indazol-5-yl group, 1H-indazol-4-yl group, 1H-indazol-6-yl group, benzo[c]isothiazol-5-yl group, benzo[c]isothiazol-4-yl group, benzo[c]isothiazol-6-yl group, benzo[c]isothiazol-7-yl group, 2H-indazol-5-yl group, 2H-indazol-4-yl group, 2H-indazol-6-yl group, imidazo[1,2-al]pyridin-6-yl group, imidazo[1,2-al]pyridin-7-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1H-pyrrolo[2,3-b]pyridin-4-yl group, isoquinolin-6-yl group, isoquinolin-3-yl group, isoquinolin-5-yl group, isoquinolin-7-yl group, dihydro-2H-

isoquinolin-6-yl group, dihydro-2H-isoquinolin-5-yl group, cinnolin-6-yl group, cinnolin-5-yl group, quinazolin-6-yl group, quinazolin-7-yl group, quinazolin-5-yl group, quinoxalin-2-yl group, quinoxalin-6-yl group, quinoxalin-5-yl group, 1H-benzimidazol-5-yl group, 1H-benzimidazol-4-yl group, benzoxazol-5-yl group, benzoxazol-6-yl group, benzoxazol-4-yl group, benzoxazol-7-yl group, 1H-pyrrolo[3,2-b]pyridin-5-yl group, 1H-pyrrolo[3,2-b]pyridin-6-yl group, benzo[1,2,5]thiadiazol-5-yl group, benzo[1,2,5]thiadiazol-4-yl group, 1H-benzotriazol-5-yl group, 1H-benzotriazol-4-yl group, 1,3-dihydropyrrolo[2,3-b]pyridin-5-yl group, 1,3-dihydropyrrolo[2,3-b]pyridin-4-yl group, 1,3-dihydrobenzimidazol-5-yl group, 1,3-dihydrobenzimidazol-4-yl group, dihydro-3H-benzoxazol-6-yl group, dihydro-3H-benzoxazol-7-yl group, dihydro-3H-benzoxazol-5-yl group, dihydro-3H-benzoxazol-4-yl group, phthalazin-6-yl group, phthalazin-5-yl group, [1,8]naphthalidin-3-yl group, [1,8]naphthalidin-4-yl group, [1,5]naphthalidin-3-yl group, [1,5]naphthalidin-4-yl group, 1H-pyrrolo[3,2-c]pyridin-6-yl group, 1H-pyrrolo[3,2-c]pyridin-4-yl group, 1H-pyrrolo[2,3-c]pyridin-5-yl group, 1H-pyrrolo[2,3-c]pyridin-4-yl group, 1H-pyrazolo[4,3-b]pyridin-5-yl group, 1H-pyrazolo[4,3-b]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-4-yl group, 1H-pyrazolo[3,4-c]pyridin-5-yl group, 1H-pyrazolo[3,4-b]pyridin-4-yl group, 1H-pyrazolo[3,4-b]pyridin-5-yl group, 1H-pyrazolo[3,4-b]pyridin-4-yl group, [1,2,4]triazolo[4,3-a]pyridin-6-yl group, [1,2,4]triazolo[4,3-a]pyridin-7-yl group, thieno[3,2-c]pyridin-2-yl group, thieno[3,2-c]pyridin-3-yl group, thieno[3,2-c]pyridin-6-yl group, thieno[3,2-b]pyridin-2-yl group, thieno[3,2-b]pyridin-3-yl group, thieno[3,2-b]pyridin-5-yl group, thieno[3,2-b]pyridin-6-yl group, 1H-thieno[3,2-c]pyrazol-5-yl group, 1H-thieno[3,2-c]pyrazol-4-yl group, benzo[d]isoxazol-5-yl group, benzo[d]isoxazol-4-yl group, benzo[d]isoxazol-6-yl group, benzo[d]isoxazol-7-yl group, benzo[c]isoxazol-5-yl group, benzo[c]isoxazol-4-yl group, benzo[c]isoxazol-6-yl group, benzo[c]isoxazol-7-yl group,

indolizin-7-yl group, indolizin-6-yl group, indolizine-8-yl group, 1,3-dihydroindol-5-yl group, 1,3-dihydroindol-4-yl group, 1,3-dihydroindol-6-yl group, 1H-pyrazolo[3,4-d]thiazol-5-yl group, 2H-isoindol-5-yl group, 2H-isoindol-4-yl group, [1,2,4]triazolo[1,5-a]pyrimidin-6-yl group, 1H-pyrazolo[3,4-b]pyrazin-5-yl group, 1H-imidazo[4,5-b]pyrazin-5-yl group, 7H-purin-2-yl group, 4H-chromen-6-yl group, or 4H-chromen-5-yl group (the aforementioned groups may be substituted with one of X_a or two or more of the same or different X_a), X_a is oxo group, thioxo group, fluorine atom, chlorine atom, trifluoromethyl group, methyl group, ethyl group, propyl group, 2-hydroxyethyl group, carboxymethyl group, 2-carboxyethyl group, N,N-dimethylcarbamoylmethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, carboxymethoxy group, 2-carboxyethoxy group, N,N-dimethylcarbamoylmethoxy group, amino group, methylamino group, dimethylamino group, 2-hydroxyethylamino group, carbamoylamino group, acetylamino group, furan-2-carboxyamino group, 2-hydroxyacetylamino group, 2-aminoacetylamino group, methylsulfonylamino group, (N,N-dimethylsulfamoyl)amino group, methanesulfonyl group, sulfamoyl group, N-methylsulfamoyl group, N,N-dimethylsulfamoyl group, carboxyl group, acetyl group, carbamoyl group, or N,N-dimethylcarbamoyl group, and

Y is hydrogen atom, methyl group, or ethyl group.

(77) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), n is an integer of 2,

C³ is carbon atom to which AR binds, C⁴ is carbon atom to which RS binds, C⁵ may be replaced with V, C² and C⁶ are unsubstituted ring-constituting carbon atoms,

V is nitrogen atom, or carbon atom substituted with Z_x, Z_x is fluorine atom, chlorine atom, bromine atom, methyl group, hydroxyl group, methoxy group, amino group, N-methylamino group, N-ethylamino group, N-propylamino group, N-

isopropylamino group, N,N-dimethylamino group, N,N-diethylamino group, formylamino group, acetylamino group, carbamoylamino group, mesylamino group, or N,N-dimethylsulfamoylamino group,

R_s is -O-R_c, p in R_c is an integer of 2, A⁴ is a single bond or methylene, A⁵ is -C(O)-, -C(S)-, or -S(O)₂-, R_d is methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, or 4-fluorophenylmethyl group, R_e is isopropyl group, butyl group, isobutyl group, t-butyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, cyclopentylmethyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, propyloxy group, isopropyloxy group, butyloxy group, isobutyloxy group, t-butyloxy group, cyclopropoxy group, cyclopentyloxy group, cyclohexyloxy group, cyclopentylmethoxy group, cyclohexylmethoxy group, phenoxy group, 4-methylphenoxy group, 4-chlorophenoxy group, 4-fluorophenoxy group, N-propylamino group, N-isopropylamino group, N-butylamino group, N-isobutylamino group, N-t-butylamino group, N-cyclopropylamino group, N-cyclopentylamino group, N-cyclohexylamino group, N-phenylamino group, N-(4-methylphenyl)amino group, N-(4-chlorophenyl)amino group, N-(4-fluorophenyl)amino group, pyrrolidino group, piperidino group, or morpholino group,

A_R is naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group, 2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-

methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group, 1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group, 2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group, 2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group, quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group, 1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group, 1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group, 3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group, imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, 1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, or benzoxazol-5-yl group, and

Y is hydrogen atom, methyl group, or ethyl group.

(78) The compound or salt thereof according to (7) mentioned above, wherein, in the formula (I), Link is -(CH₂)_n-, n is an integer of 2, AR binds to C³ in the aromatic

ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ is a ring-constituting carbon atom substituted with Zx, or an unsubstituted ring-constituting carbon atom, C² and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is -O-Rx, and Y is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

(79) The compound or salt thereof according to (78) mentioned above, wherein, in the formula (I), Xa which may substitute on AR is methyl group, ethyl group, propyl group, hydroxyethyl group, carboxymethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, amino group, methylamino group, dimethylamino group, carboxyl group, carbamoyl group, acetyl group, methanesulfonyl group, sulfamoyl group, or N,N-dimethylsulfamoyl group.

(80) The compound or salt thereof according to (78) or (79) mentioned above, wherein, in the formula (I), Rs is -O-Rx, Rx is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, or cyclohexylmethyl group, or Rb (provided that Q in Rb is phenyl group or indan-2-yl group), A¹ is a single bond, or methylene group substituted with methyl group or ethyl group or unsubstituted methylene group, or ethylene group substituted with methyl group or ethyl group or unsubstituted ethylene group, A² is a single bond, oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)- (provided that when A² is oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)-, A¹ is ethylene), and R² and R³ independently represent hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, or dimethylamino group (provided that when Q is phenyl group, A¹ is a single bond or unsubstituted methylene, and A² is a single bond, one of R² and R³ is a substituent other than hydrogen atom).

(81) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), n is an integer of 1 to 3,

C³ is carbon atom to which AR binds, C⁴ is carbon atom to which Rs binds,

C⁵ may be replaced with V, C³ and C⁶ are unsubstituted ring-constituting carbon atoms,

V is nitrogen atom, or carbon atom substituted with Zx, Zx is fluorine atom, chlorine atom, bromine atom, nitro group, methyl group, hydroxyl group, methoxy group, amino group, N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino group, N,N-dimethylamino group, N,N-diethylamino group, formylamino group, acetylamino group, carbamoylamino group, mesylamino group, or N,N-dimethylsulfamoylamino group,

R_s is -O-Rx, Rx is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-cyclopentylethyl group, or 2-cyclohexylethyl group, or Rb or R_c, Q in Rb is phenyl group, thiienyl group, furyl group, pyridyl group, oxazolyl group, naphthyl group, tetrahydronaphthyl group, indanyl group, indolyl group, or dihydrobenzodioxyl group, A² is a single bond, oxygen atom, sulfur atom, N(methyl)-, or -N(ethyl)- (provided that when A² is oxygen atom, sulfur atom, N(methyl)-, or -N(ethyl)-, A¹ is ethylene), R² and R³ independently represent hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, dimethylamino group, acetylamino group, or methylsulfonylamino group (provided that when Q is phenyl group, A¹ is a single bond or unsubstituted methylene, and A² is a single bond, one of R² and R³ is a substituent other than hydrogen atom), p in R_c is an integer of 2 or 3, A⁴ is a single bond or methylene, A⁵ is -C(O)-, -C(S)-, or -S(O)₂-, R_d is hydrogen atom, or methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, cyclopropyl group, cyclopropylmethyl group, cyclopentyl group, cyclopentylmethyl group, cyclohexyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, or

pyridin-4-yl group, Re is methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, cyclopentylmethyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, phenylmethyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, pyridin-4-yl group, furan-2-yl group, furan-3-yl group, thiophen-2-yl group, thiophen-3-yl group, methoxy group, ethoxy group, propyloxy group, isopropyloxy group, butyloxy group, isobutyloxy group, t-butyloxy group, cyclopropyloxy group, cyclopentyloxy group, cyclohexyloxy group, cyclopentylmethoxy group, cyclohexylmethoxy group, phenoxy group, 4-methylphenoxy group, 4-chlorophenoxy group, 4-fluorophenoxy group, thiomethoxy group, amino group, N-methylamino group, N,N-dimethylamino group, N-ethylamino group, N,N-diethylamino group, N-propylamino group, N-isopropylamino group, N-butylamino group, N-isobutylamino group, N-t-butylamino group, N-cyclopropylamino group, N-cyclopentylamino group, N-cyclohexylamino group, N-phenylamino group, N-(4-methylphenyl)amino group, N-(4-chlorophenyl)amino group, N-(4-fluorophenyl)amino group, N-(pyridin-2-yl)amino group, N-(pyridin-3-yl)amino group, N-(pyridin-4-yl)amino group, N-(furan-2-yl)amino group, N-(furan-3-yl)amino group, N-(thiophen-2-yl)amino group, N-(thiophen-3-yl)amino group, pyrrolidino group, piperidino group, morpholino group, methyloxycarbonylamino group, or ethyloxycarbonylamino group,

AR is cinnolin-6-yl group, cinnolin-5-yl group, quinazolin-6-yl group, quinazolin-7-yl group, quinazolin-5-yl group, quinoxalin-2-yl group, quinoxalin-6-yl group, quinoxalin-5-yl group, 1H-benzimidazol-5-yl group, 1H-benzimidazol-4-yl group, benzoxazol-5-yl group, benzoxazol-6-yl group, benzoxazol-4-yl group, benzoxazol-7-yl group, 1H-pyrrolo[3,2-b]pyridin-5-yl group, 1H-pyrrolo[3,2-b]pyridin-6-yl group, benzo[1,2,5]thiadiazol-5-yl group, benzo[1,2,5]thiadiazol-4-yl

group, 1H-benzotriazol-5-yl group, 1H-benzotriazol-4-yl group, 1,3-dihydropyrrolo[2,3-b]pyridin-5-yl group, 1,3-dihydropyrrolo[2,3-b]pyridin-4-yl group, 1,3-dihydrobenzimidazol-5-yl group, 1,3-dihydrobenzimidazol-4-yl group, dihydro-3H-benzoxazol-6-yl group, dihydro-3H-benzoxazol-7-yl group, dihydro-3H-benzoxazol-5-yl group, dihydro-3H-benzoxazol-4-yl group, phthalazin-6-yl group, phthalazin-5-yl group, [1,8]naphthalidin-3-yl group, [1,8]naphthalidin-4-yl group, [1,5]naphthalidin-3-yl group, [1,5]naphthalidin-4-yl group, 1H-pyrrolo[3,2-c]pyridin-6-yl group, 1H-pyrrolo[3,2-c]pyridin-4-yl group, 1H-pyrrolo[2,3-c]pyridin-5-yl group, 1H-pyrrolo[2,3-c]pyridin-4-yl group, 1H-pyrazolo[4,3-b]pyridin-5-yl group, 1H-pyrazolo[4,3-b]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-4-yl group, 1H-pyrazolo[3,4-c]pyridin-5-yl group, 1H-pyrazolo[3,4-c]pyridin-4-yl group, 1H-pyrazolo[3,4-b]pyridin-5-yl group, 1H-pyrazolo[3,4-b]pyridin-4-yl group, [1,2,4]triazolo[4,3-a]pyridin-6-yl group, thieno[3,2-c]pyridin-2-yl group, thieno[3,2-c]pyridin-3-yl group, thieno[3,2-c]pyridin-6-yl group, thieno[3,2-b]pyridin-2-yl group, thieno[3,2-b]pyridin-3-yl group, thieno[3,2-b]pyridin-5-yl group, thieno[3,2-b]pyridin-6-yl group, 1H-thieno[3,2-c]pyrazol-5-yl group, 1H-thieno[3,2-c]pyrazol-4-yl group, benzo[d]isoxazol-5-yl group, benzo[d]isoxazol-4-yl group, benzo[d]isoxazol-6-yl group, benzo[d]isoxazol-7-yl group, benzo[c]isoxazol-4-yl group, benzo[c]isoxazol-6-yl group, benzo[c]isoxazol-7-yl group, indolizin-7-yl group, indolizin-6-yl group, indolizine-8-yl group, 1,3-dihydroindol-5-yl group, 1,3-dihydroindol-4-yl group, 1,3-dihydroindol-6-yl group, 1H-pyrazolo[3,4-d]thiazol-5-yl group, 2H-isoindol-5-yl group, 2H-isoindol-4-yl group, [1,2,4]triazolo[1,5-a]pyrimidin-6-yl group, 1H-pyrazolo[3,4-b]pyrazin-5-yl group, 1H-imidazo[4,5-b]pyrazin-5-yl group, 7H-purin-2-yl group, 4H-chromen-6-yl group, or 4H-chromen-5-yl group (the aforementioned groups may be substituted with one of Xa or two or more of the same or different Xa), Xa is oxo group, thioxo group,

fluorine atom, chlorine atom, trifluoromethyl group, methyl group, ethyl group, propyl group, 2-hydroxyethyl group, carboxymethyl group, 2-carboxyethyl group, N,N-dimethylcarbamoylmethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, carboxymethoxy group, 2-carboxyethoxy group, N,N-dimethylcarbamoylmethoxy group, amino group, methylamino group, dimethylamino group, 2-hydroxyethylamino group, carbamoylamino group, acetylamino group, furan-2-carboxyamino group, 2-hydroxyacetylamino group, 2-aminoacetylamino group, methylsulfonylamino group, (N,N-dimethylsulfamoyl)amino group, methanesulfonyl group, sulfamoyl group, N-methylsulfonyl group, N,N-dimethylsulfamoyl group, carboxyl group, acetyl group, carbamoyl group, or N,N-dimethylcarbamoyl group, and

Y is hydrogen atom, methyl group, or ethyl group.

(82) The compound or salt thereof according to (6) mentioned above, wherein, in the formula (I), Link is $-(\text{CH}_2)_n-$, AR binds to C³ in the aromatic ring (E), Rs binds to C⁴ in the aromatic ring (E), C⁵ is a ring-constituting carbon atom substituted with Zx, or an unsubstituted ring-constituting carbon atom, C² and C⁶ are unsubstituted ring-constituting carbon atoms, Rs is -O-Rx, and Rx is a linear or branched saturated alkyl group having 3 to 8 carbon atoms, or Ra or Rb.

(83) The compound or salt thereof according to (82) mentioned above, wherein, in the formula (I), Zx is fluorine atom, chlorine atom, nitro group, amino group, methyl group, or OR⁹.

(84) The compound or salt thereof according to (1-2) mentioned above, wherein, in the formula (I), n is an integer of 1 to 3, AR binds to C³, Rs binds to one of the ring-constituting atoms C⁴, C⁵, and C⁶, a ring-constituting carbon atom to which Rs does not bind among C⁴, C⁵, and C⁶ may be replaced with V,

V is nitrogen atom or carbon atom substituted with Zx, Zx is fluorine atom, chlorine atom, bromine atom, nitro group, methyl group, hydroxyl group, methoxy

group, amino group, N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino group, N,N-dimethylamino group, N,N-diethylamino group, formylamino group, acetylamino group, carbamoylamino group, mesylamino group, or N,N-dimethylsulfamoylamino group.

Rs is -D-Rx or -N(Ry)(Rz), D is oxygen atom or sulfur atom, Rx is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-cyclopentylethyl group, or 2-cyclohexylethyl group, or Rb or Re, Q in Rb is phenyl group, thiienyl group, furyl group, pyridyl group, oxazolyl group, naphthyl group, tetrahydronaphthyl group, indanyl group, indolyl group, or dihydrobenzodioxyl group, A² is a single bind, oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)- (provided that when A² is oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)-, A¹ is ethylene), R² and R³ independently represent hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, dimethylamino group, acetylamino group, or methylsulfonylamino group (provided that when Q is phenyl group, A¹ is a single bind or unsubstituted methylene, and A² is a single bind, one of R² and R³ is a substituent other than hydrogen atom), p in Re is an integer of 2 or 3, A⁴ is a single bind or methylene, A⁵ is -C(O)-, -C(S)-, or -S(O)₂-, Rd is hydrogen atom, or methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, cyclopropyl group, cyclopropylmethyl group, cyclopentyl group, cyclopentylmethyl group, cyclohexyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, or pyridin-4-yl group, Re is methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, cyclopentylmethyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-

chlorophenyl group, 4-fluorophenyl group, phenylmethyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, pyridin-4-yl group, furan-2-yl group, furan-3-yl group, thiophen-2-yl group, thiophen-3-yl group, methoxy group, ethoxy group, propyloxy group, isopropyloxy group, butyloxy group, isobutyloxy group, t-butyloxy group, cyclopropyloxy group, cyclopentyloxy group, cyclohexyloxy group, cyclopentylmethyloxy group, cyclohexylmethyloxy group, phenyloxy group, 4-methylphenyloxy group, 4-chlorophenyloxy group, 4-fluorophenyloxy group, thiomethoxy group, amino group, N-methylamino group, N,N-dimethylamino group, N-ethylamino group, N,N-diethylamino group, N-propylamino group, N-isopropylamino group, N-butylamino group, N-isobutylamino group, N-t-butylamino group, N-cyclopropylamino group, N-cyclopentylamino group, N-cyclohexylamino group, N-phenylamino group, N-(4-methylphenyl)amino group, N-(4-chlorophenyl)amino group, N-(4-fluorophenyl)amino group, N-(pyridin-2-yl)amino group, N-(pyridin-3-yl)amino group, N-(furan-2-yl)amino group, N-(furan-3-yl)amino group, N-(thiophen-2-yl)amino group, N-(thiophen-3-yl)amino group, pyrrolidino group, piperidino group, morpholino group, methyloxycarbonylamino group or ethyloxycarbonylamino group, Rz is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-

dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group, 2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, 2-(N-ethyl-N-phenylamino)ethyl group, isobutryl group, isopropylthiocarbonyl group, isopropylsulfonyl group, valeryl group, butylthiocarbonyl group, isovaleryl group, isobutylthiocarbonyl group,

pivaloyl group, t-butylthiocarbonyl group, cyclopropylcarbonyl group, cyclopropylthiocarbonyl group, cyclopentylcarbonyl group, cyclopentylthiocarbonyl group, cyclohexylcarbonyl group, cyclohexylthiocarbonyl group, cyclopentylmethylcarbonyl group, cyclopentylmethylthiocarbonyl group, cyclohexylmethylcarbonyl group, cyclohexylmethylthiocarbonyl group, benzoyl group, thiobenzoyl group, phenylsulfonyl group, 4-methylphenylcarbonyl group, 4-methylphenylthiocarbonyl group, 4-methylphenylsulfonyl group, 4-chlorophenylcarbonyl group, 4-chlorophenylthiocarbonyl group, 4-fluorophenylcarbonyl group, 4-fluorophenylthiocarbonyl group, isopropoxy carbonyl group, N-isopropylcarbamoyl group, N-isopropylthiocarbamoyl group, butyloxycarbonyl group, N-butylcarbamoyl group, N-butylthiocarbamoyl group, isobutyloxycarbonyl group, N-isobutylcarbamoyl group, N-isobutylthiocarbamoyl group, t-butylloxycarbonyl group, N-t-butylcarbamoyl group, N-t-butylthiocarbamoyl group, cyclopropoxycarbonyl group, N-cyclopropylcarbamoyl group, N-cyclopentylthiocarbamoyl group, N-cyclopentylcarbamoyl group, N-cyclohexyloxycarbonyl group, N-cyclohexylthiocarbamoyl group, N-cyclohexylcarbamoyl group, N-cyclohexylthiocarbamoyl group, N-(4-methylphenyl)carbamoyl group, N-(4-methylphenyl)thiocarbamoyl group, N-(4-chlorophenyl)carbamoyl group, N-(4-chlorophenyl)thiocarbamoyl group, N-(4-fluorophenyl)carbamoyl group, N-(4-fluorophenyl)thiocarbamoyl group, (pyrrolidino-1-yl)carbonyl group, (piperidino-1-yl)carbonyl group, or (morpholino-4-yl)carbonyl group, Ry is hydrogen atom, methyl group, ethyl group or isobutyl group, or binds to Rz to form pyrrolidino group,

piperidino group, piperazino group, morpholino group, pyrrol-1-yl group, imidazol-1-yl group, or pyrazol-1-yl group together with the nitrogen atom,

AR is naphthalen-2-yl group, naphthalen-1-yl group, benzofuran-5-yl group, benzofuran-4-yl group, benzofuran-2-yl group, benzo[b]thiophen-5-yl group, benzo[b]thiophen-4-yl group, benzo[b]thiophen-2-yl group, indol-5-yl group, indol-4-yl group, indol-6-yl group, benzothiazol-6-yl group, benzothiazol-7-yl group, benzothiazol-5-yl group, benzothiazol-4-yl group, dihydro-3H-benzothiazol-6-yl group, dihydro-3H-benzothiazol-7-yl group, dihydro-3H-benzothiazol-5-yl group, dihydro-3H-benzothiazol-4-yl group, quinolin-6-yl group, quinolin-3-yl group, quinolin-5-yl group, quinolin-7-yl group, dihydro-1H-quinolin-6-yl group, dihydro-1H-quinolin-5-yl group, benzod[1,2-d]isothiazol-5-yl group, benzod[1,2-d]isothiazol-4-yl group, benzod[1,2-d]isothiazol-6-yl group, benzod[1,2-d]isothiazol-7-yl group, 1H-indazol-5-yl group, 1H-indazol-4-yl group, 1H-indazol-6-yl group, benzo[c]isothiazol-5-yl group, benzo[c]isothiazol-4-yl group, benzo[c]isothiazol-6-yl group, benzo[c]isothiazol-7-yl group, 2H-indazol-5-yl group, 2H-indazol-4-yl group, 2H-indazol-6-yl group, imidazo[1,2-a]pyridin-6-yl group, imidazo[1,2-a]pyridin-7-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1H-pyrrolo[2,3-b]pyridin-4-yl group, isoquinolin-6-yl group, isoquinolin-3-yl group, isoquinolin-5-yl group, isoquinolin-7-yl group, dihydro-2H-isoquinolin-6-yl group, dihydro-2H-isoquinolin-5-yl group, cinnolin-6-yl group, cinnolin-5-yl group, quinazolin-6-yl group, quinazolin-7-yl group, quinazolin-5-yl group, quinoxalin-2-yl group, quinoxalin-6-yl group, quinoxalin-5-yl group, 1H-benzimidazol-5-yl group, 1H-benzimidazol-4-yl group, benzoxazol-5-yl group, benzoxazol-6-yl group, benzoxazol-4-yl group, benzoxazol-7-yl group, 1H-pyrrolo[3,2-b]pyridin-5-yl group, 1H-pyrrolo[3,2-b]pyridin-6-yl group, benzo[1,2,5]thiadiazol-5-yl group, benzo[1,2,5]thiadiazol-4-yl group, 1H-benzotriazol-5-yl group, 1H-benzotriazol-4-yl group, 1,3-dihydropyrrolo[2,3-b]pyridin-5-yl group, 1,3-dihydropyrrolo[2,3-b]pyridin-4-yl group, 1,3-

dihydrobenzimidazol-5-yl group, 1,3-dihydrobenzimidazol-4-yl group, dihydro-3H-benzoxazol-6-yl group, dihydro-3H-benzoxazol-7-yl group, dihydro-3H-benzoxazol-5-yl group, dihydro-3H-benzoxazol-4-yl group, phthalazin-6-yl group, phthalazin-5-yl group, [1,8]naphthalidin-3-yl group, [1,8]naphthalidin-4-yl group, [1,5]naphthalidin-3-yl group, [1,5]naphthalidin-4-yl group, 1H-pyrrolo[3,2-c]pyridin-6-yl group, 1H-pyrrolo[3,2-c]pyridin-4-yl group, 1H-pyrrolo[2,3-c]pyridin-5-yl group, 1H-pyrrolo[2,3-c]pyridin-4-yl group, 1H-pyrazolo[4,3-b]pyridin-5-yl group, 1H-pyrazolo[4,3-b]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-4-yl group, 1H-pyrazolo[3,4-c]pyridin-5-yl group, 1H-pyrazolo[3,4-c]pyridin-4-yl group, 1H-pyrazolo[3,4-b]pyridin-5-yl group, 1H-pyrazolo[3,4-b]pyridin-4-yl group, [1,2,4]triazolo[4,3-a]pyridin-6-yl group, [1,2,4]triazolo[4,3-a]pyridin-7-yl group, thieno[3,2-c]pyridin-2-yl group, thieno[3,2-c]pyridin-3-yl group, thieno[3,2-c]pyridin-6-yl group, thieno[3,2-b]pyridin-2-yl group, thieno[3,2-b]pyridin-3-yl group, thieno[3,2-b]pyridin-5-yl group, thieno[3,2-b]pyridin-6-yl group, 1H-thieno[3,2-c]pyrazol-5-yl group, 1H-thieno[3,2-c]pyrazol-4-yl group, benzo[d]isoxazol-5-yl group, benzo[d]isoxazol-4-yl group, benzo[d]isoxazol-6-yl group, benzo[d]isoxazol-7-yl group, benzo[c]isoxazol-5-yl group, benzo[c]isoxazol-4-yl group, benzo[c]isoxazol-6-yl group, benzo[c]isoxazol-7-yl group, indolizin-7-yl group, indolizin-6-yl group, indolizine-8-yl group, 1,3-dihydroindol-5-yl group, 1,3-dihydroindol-4-yl group, 1,3-dihydroindol-6-yl group, 1H-pyrazolo[3,4-d]thiazol-5-yl group, 2H-isoindol-5-yl group, 2H-isoindol-4-yl group, [1,2,4]triazolo[1,5-a]pyrimidin-6-yl group, 1H-pyrazolo[3,4-b]pyrazin-5-yl group, 1H-imidazo[4,5-b]pyrazin-5-yl group, 7H-purin-2-yl group, 4H-chromen-6-yl group, or 4H-chromen-5-yl group (the aforementioned groups may be substituted with one of Xa or two or more of the same or different Xa), Xa is oxo group, thioxo group, fluorine atom, chlorine atom, trifluoromethyl group, methyl group, ethyl group, propyl group, 2-hydroxyethyl group, carboxymethyl group, 2-carboxyethyl group,

N,N-dimethylcarbamoylmethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, carboxymethoxy group, 2-carboxyethoxy group, N,N-dimethylcarbamoylmethoxy group, amino group, methylamino group, dimethylamino group, 2-hydroxyethylamino group, carbamoylamino group, acetylamino group, furan-2-carboxyamino group, 2-hydroxyacetylamino group, 2-aminoacetylamino group, methylsulfonylamino group, (N,N-dimethylsulfamoyl)amino group, methanesulfonyl group, sulfamoyl group, N-methylsulfamoyl group, N,N-dimethylsulfamoyl group, carboxyl group, acetyl group, carbamoyl group, or N,N-dimethylcarbamoyl group, and

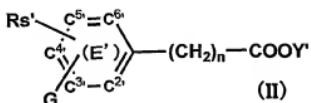
Y is hydrogen atom, methyl group, or ethyl group.

- (85) A medicament containing a compound represented by the aforementioned formula (I) or a pharmacologically acceptable salt thereof as an active ingredient.
- (86) An agent for suppressing production of a prostaglandin and/or leukotriene, which contains a compound represented by the aforementioned formula (I) or a pharmacologically acceptable salt thereof as an active ingredient.
- (87) The medicament according to (85) for prophylactic and/or therapeutic treatment of a disease caused by production of a prostaglandin and/or leukotriene.
- (88) The medicament according to (85) for prophylactic and/or therapeutic treatment of an inflammatory disease of a mammal.
- (89) The medicament according to (85) for prophylactic and/or therapeutic treatment of an autoimmune disease of a mammal.
- (90) The medicament according to (85) for prophylactic and/or therapeutic treatment of an allergic disease of a mammal.
- (91) The medicament according to (85) for defervescence and/or pain relief of a mammal.
- (92) A pharmaceutical composition for prophylactic and/or therapeutic treatment of a condition of living body of a mammal exhibiting an acute or chronic inflammatory

reaction, which comprises a prophylactically and/or therapeutically effective amount of a compound represented by the aforementioned formula (I) or a pharmacologically acceptable salt thereof and a pharmaceutically acceptable carrier.

(93) A method for prophylactic and/or therapeutic treatment of a condition of living body of a mammal exhibiting an acute or chronic inflammatory reaction, which comprises administering a prophylactically and/or therapeutically effective amount of a compound represented by the aforementioned formula (I) or a pharmacologically acceptable salt thereof to the mammal.

(94) A compound represented by the following formula (II):



[In the formula, each of C^a, C^b, C^c, C^d, C^e, and C^f in the aromatic ring (E') represents a ring-constituting carbon atom, any one of them to which R_{s'} and G does not bind may be replaced with V.]

V' represents nitrogen atom, or carbon atom substituted with Zx' , Zx' has the same meaning as Zx mentioned above, provided that when Zx contains hydroxyl group, the hydroxyl group may be protected with Rp^1 , and when Zx contains amino group, the amino group may be protected with Rp^2 .

Rs' represents -D-Rx' or -N(Ry')(Rz').

-D-Rx' and -N(Ry')(Rz') have the same meanings as -D-Rx and -N(Ry)(Rz), respectively, provided that when -D-Rx or -N(Ry)(Rz) contains hydroxyl group, the hydroxyl group may be protected with Rp¹, when -D-Rx or -N(Ry)(Rz) contains amino group, the amino group may be protected with Rp².

G represents chlorine atom, bromine atom, iodine atom, mesylate group,

triflate group, or an arenesulfonate group of which aromatic portion may be substituted with one of T¹ or two or more of the same or different T¹, and

Y' represents a lower alkyl group having 1 to 4 carbon atoms.

(95) The compound according to (94) mentioned above, wherein, in the formula (II), G binds to the ring-constituting carbon atom C^{2'} or C^{3'} in the aromatic ring (E').

(96) The compound according to (94) or (95) mentioned above, wherein, in the formula (II), n is an integer of 2.

(97) The compound according to any one of (94) to (96) mentioned above, wherein, in the formula (II), R^a' is -O-Rx'.

(98) The compound according to any one of (94) to (97) mentioned above, wherein, in the formula (II), R^a' is -D-Rx' or -N(Ry')(Rz'), D is a single bind, oxygen atom, sulfur atom, -S(O)-, -S(O)₂, or -C(O)-, Rx' is a linear or branched saturated alkyl group having 3 to 8 carbon atoms, or Ra, Rb, or Rc, k in Ra is 0 or an integer of 1 to 3, R¹ is a saturated cyclic alkyl group having 3 to 7 carbon atoms or a condensed saturated cyclic alkyl group having 6 to 8 carbon atoms, R¹ may be substituted with one of lower alkyl group having 1 to 4 carbon atoms or two or more of the same or different lower alkyl groups having 1 to 4 carbon atoms, Q in Rb is phenyl group, thiienyl group, furyl group, pyrrolyl group, pyridyl group, oxazolyl group, isoxazolyl group, thiazolyl group, isothiazolyl group, imidazolyl group, pyrazolyl group, oxadiazolyl group, thiadiazolyl group, triazolyl group, tetrazolyl group, naphthyl group, tetrahydronaphthyl group, indanyl group, indenyl group, quinolyl group, isoquinolyl group, indolyl group, benzofuryl group, benzothienyl group, benzimidazolyl group, benzoxazolyl group, benzothiazolyl group, indazolyl group, 4H-chromenyl group, dihydrobenzodioxyl group, benzoisoxazolyl group, pyrrolopyridinyl group, pyrazolopyridinyl group, triazolopyridinyl group, thienopyridinyl group, thienopyrazolyl group, 1,3-dihydrobenzimidazole group, dihydro-3H-benzoxazole group, or dihydro-3H-benzothiazole group, which binds to

A^2 at an arbitrary position on the ring, A^1 is a single bind or an alkylene (a) having 1 to 3 carbon atoms, the alkylene (a) may be substituted with a lower alkyl group having 1 to 4 carbon atoms or phenyl group, A^2 is a single bind, oxygen atom, sulfur atom, $-S(O)$, $-S(O)_2$, or $-N(R^4)$ (provided that when A^2 is oxygen atom, sulfur atom, $-S(O)$, $-S(O)_2$, or $-N(R^4)$, A^1 is ethylene or trimethylene), R^2 and R^3 independently represent hydrogen atom, a linear or branched saturated alkyl group having 1 to 4 carbon atoms, oxo group, thioxo group, fluorine atom, chlorine atom, bromine atom, trifluoromethyl group, $-OR^5$, $-N(R^6)(R^6)$, $-NHCOR^7$, $-NHSO_2R^8$, or $-A^6-Qa$, or they bind to each other to form methylenedioxy group, Qa may be substituted with one of T^1 or two or more of the same or different T^1 , and is phenyl group, pyridyl group, oxazolyl group, isoxazolyl group, thiazolyl group, isothiazolyl group, imidazolyl group, pyrazolyl group, oxadiazolyl group, thiadiazolyl group, triazolyl group, tetrazolyl group, naphthyl group, indanyl group, indenyl group, quinolyl group, isoquinolyl group, indolyl group, benzofuryl group, benzothienyl group, benzimidazolyl group, benzoxazolyl group, benzothiazolyl group, or indazolyl group, which binds to A^6 at an arbitrary position on the ring, R^4 and R^6 independently represent hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms, R^5 and R^7 independently represent hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms, or $-A^6-Qa$, R^8 represents a lower alkyl group having 1 to 4 carbon atoms, R^6 has the same meaning as R^6 , or binds to R^6 to form a 3- to 6-membered ring of a cycloalkyl group or morpholino group together with the nitrogen atom to which they bind, p in Rc is an integer of 2 to 4, A^4 is a single bind or methylene or ethylene, A^5 is $-C(O)$, $-C(S)$, or $-S(O)_2$, Rd is hydrogen atom, an alkyl group having 1 to 8 carbon atoms, or Qa , Re is an alkyl group having 1 to 8 carbon atoms, $-A^6-Qa$, $-(CH_2)_iR^{14}$, $-OR^{28}$, $-SR^{28}$, or $-N(R^{29})(R^{30})$, i is an integer of 1 to 3, R^{14} is hydroxyl group, an alkoxy group having 1 to 4 carbon atoms, carboxyl group, or an N,N -dialkylcarbamoyl group having 1 to 4 carbon atoms, R^{28} is an alkyl group having 1

to 8 carbon atoms or ·A⁶-Qa, R²⁹ is an alkyl group having 1 to 8 carbon atoms, an alkoxy carbonyl group having 1 to 4 carbon atoms, or ·A⁶-Qa, R³⁰ represents hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms, or binds to R²⁹ to form a 3- to 6-membered ring of nitrogen-containing cycloalkyl group or morpholino group together with the nitrogen atom to which they bind, Rz' has the same meaning as Rx', or represents ·A⁵-Re, Ry' represents hydrogen atom, an alkyl group having 1 to 8 carbon atoms, or ·A⁶-Qp, or binds to Rz' to form a saturated or unsaturated nitrogen-containing cyclic substituent having 3 to 7 atoms together with the nitrogen atom to which they bind, when ·D-Rx' or ·N(Ry')(Rz') contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when ·D-Rx' or ·N(Ry')(Rz') contains amino group, the amino group may be protected with Rp².

(99) The compound according to (94) mentioned above, wherein, in the formula (II), n is an integer of 1 to 3,

G binds to C^{3'}, Rs' binds to one of the ring-constituting carbon atoms C^{4'}, C^{5'}, and C^{6'}, a ring-constituting carbon atom to which Rs' does not bind among C^{4'}, C^{5'}, and C^{6'} may be replaced with V',

V' is nitrogen atom or carbon atom substituted with Zx', Zx' is fluorine atom, chlorine atom, bromine atom, nitro group, methyl group, hydroxyl group, methoxy group, amino group, N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino group, N,N-dimethylamino group, N,N-diethylamino group, formylamino group, acetylamino group, carbamoylamino group, mesylamino group, or N,N-dimethylsulfamoylamino group, provided that when Zx' contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when Zx' contains amino group, the amino group may be protected with Rp²,

Rs' is ·D-Rx' or ·N(Ry')(Rz'), D is oxygen atom or sulfur atom, Rx' is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-

cyclopentylethyl group, or 2-cyclohexylethyl group, or Rb or Rc, Q in Rb is phenyl group, thiienyl group, furyl group, pyridyl group, oxazolyl group, naphthyl group, tetrahydronaphthyl group, indanyl group, indolyl group, or dihydrobenzodioxyl group, A² is a single bind, oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)- (provided that when A² is oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)-, A¹ is ethylene), R² and R³ independently represent hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, dimethylamino group, acetylamino group, or methylsulfonylamino group (provided that when Q is phenyl group, A¹ is a single bind or unsubstituted methylene, and A² is a single bind, one of R² and R³ is a substituent other than hydrogen atom), p in Rc is an integer of 2 or 3, A⁴ is a single bind or methylene, A⁵ is -C(O)-, -C(S)-, or -S(O)₂-, Rd is hydrogen atom, or methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, cyclopropyl group, cyclopropylmethyl group, cyclopentyl group, cyclopentylmethyl group, cyclohexyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, or pyridin-4-yl group, Re is methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, cyclopentylmethyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, phenylmethyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, pyridin-4-yl group, furan-2-yl group, furan-3-yl group, thiophen-2-yl group, thiophen-3-yl group, methoxy group, ethoxy group, propyloxy group, isopropyloxy group, butyloxy group, isobutyloxy group, t-butyloxy group, cyclopropyloxy group, cyclopentyloxy group, cyclohexyloxy group, cyclopentylmethoxy group, cyclohexylmethoxy group, phenoxy group, 4-

methylphenyloxy group, 4-chlorophenyloxy group, 4-fluorophenyloxy group, thiomethoxy group, amino group, N-methylamino group, N,N-dimethylamino group, N-ethylamino group, N,N-diethylamino group, N-propylamino group, N-isopropylamino group, N-butylamino group, N-isobutylamino group, N-t-butylamino group, N-cyclopropylamino group, N-cyclopentylamino group, N-cyclohexylamino group, N-phenylamino group, N-(4-methylphenyl)amino group, N-(4-chlorophenyl)amino group, N-(4-fluorophenyl)amino group, N-(pyridin-2-yl)amino group, N-(pyridin-3-yl)amino group, N-(pyridin-4-yl)amino group, N-(furan-2-yl)amino group, N-(furan-3-yl)amino group, N-(thiophen-2-yl)amino group, N-(thiophen-3-yl)amino group, pyrrolidino group, piperidino group, morpholino group, methyloxycarbonylamino group or ethyloxycarbonylamino group, Rz is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-

chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group, 2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, 2-(N-ethyl-N-phenylamino)ethyl group, isobutryl group, isopropylthiocarbonyl group, isopropylsulfonyl group, valeryl group, butylthiocarbonyl group, isovaleryl group, isobutylthiocarbonyl group, pivaloyl group, t-butylthiocarbonyl group, cyclopropylcarbonyl group, cyclopropylthiocarbonyl group, cyclohexylcarbonyl group, cyclohexylthiocarbonyl group, cyclopentylmethylcarbonyl group, cyclopentylmethylthiocarbonyl group, cyclohexylmethylcarbonyl group, cyclohexylmethylthiocarbonyl group, benzoyl group, thiobenzoyl group, phenylsulfonyl group, 4-methylphenylcarbonyl group, 4-methylphenylthiocarbonyl group, 4-methylphenylsulfonyl group, 4-

chlorophenylcarbonyl group, 4-chlorophenylthiocarbonyl group, 4-fluorophenylcarbonyl group, 4-fluorophenylthiocarbonyl group, isopropoxy carbonyl group, N-isopropylcarbamoyl group, N-isopropylthiocarbamoyl group, butyloxycarbonyl group, N-butyloxycarbonyl group, N-butyloxylthiocarbamoyl group, isobutyloxycarbonyl group, N-isobutyloxycarbonyl group, N-isobutyloxylthiocarbamoyl group, t-butyloxycarbonyl group, N-t-butyloxycarbonyl group, N-t-butyloxylthiocarbamoyl group, N-t-butyloxylthiocarbamoyl group, cyclopropoxycarbonyl group, N-cyclopropylcarbamoyl group, N-cyclopropylthiocarbamoyl group, cyclopentyloxycarbonyl group, N-cyclopentyloxycarbonyl group, N-cyclopentylthiocarbamoyl group, cyclohexylcarbamoyl group, N-cyclohexylthiocarbamoyl group, cyclopentylmethyloxycarbonyl group, cyclohexylmethyloxycarbonyl group, phenoxy carbonyl group, N-phenylcarbamoyl group, N-phenylthiocarbamoyl group, 4-methylphenoxy carbonyl group, N-(4-methylphenyl)carbamoyl group, N-(4-methylphenyl)thiocarbamoyl group, 4-chlorophenoxy carbonyl group, N-(4-chlorophenyl)thiocarbamoyl group, 4-fluorophenoxy carbonyl group, N-(4-fluorophenyl)carbamoyl group, N-(4-fluorophenyl)thiocarbamoyl group, (pyrrolidino-1-yl)carbonyl group, (piperidino-1-yl)carbonyl group, or (morpholino-4-yl)carbonyl group, Ry is hydrogen atom, methyl group, ethyl group or isobutyl group, or binds to Rz to form pyrrolidino group, piperidino group, piperazino group, morpholino group, pyrrol-1-yl group, imidazol-1-yl group, or pyrazol-1-yl group together with the nitrogen atom to which they binds, provided that when -D-Rx' or -N(Ry')(Rz') contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when -D-Rx' or -N(Ry')(Rz') contains amino group, the amino group may be protected with Rp²,

G is chlorine atom, bromine atom, iodine atom, or triflate group, and

Y is methyl group or ethyl group.

- (100) The compound according to any one of (94) to (96) mentioned above, wherein, in the formula (II), Rs' is $\cdot\text{N}(\text{Ry}')(\text{Rz}')$.
- (101) The compound according to any one of (94) to (96) mentioned above, wherein, in the formula (II), Rs' is $\cdot\text{D}-\text{Rx}'$, and D is sulfur atom, $\cdot\text{S}(\text{O})\cdot$, $\cdot\text{S}(\text{O})_2\cdot$ or $\cdot\text{C}(\text{O})\cdot$.
- (102) The compound according to (94) mentioned above, wherein, in the formula (II), G binds at the position of C^2' in the aromatic ring (E'), Rs' binds to one of the ring-constituting carbon atoms C^3' , C^4' and C^5' , and all of C^2' , C^3' , C^4' , C^5' and C^6' in the aromatic ring (E') are not replaced with V' .
- (103) The compound according to (94) mentioned above, wherein, in the formula (II), n is an integer of 1 to 3,

G binds to C^2' , Rs' binds to one of the ring-constituting carbon atoms C^4' , C^5' , and C^6' , a ring-constituting carbon atom to which Rs' does not bind among C^3' , C^4' , and C^5' may be replaced with V' ,

V' is nitrogen atom, or carbon atom substituted with Zx' , Zx' is fluorine atom, chlorine atom, bromine atom, nitro group, methyl group, hydroxyl group, methoxy group, amino group, N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino group, N,N-dimethylamino group, N,N-diethylamino group, formylamino group, acetylarnino group, carbamoylarnino group, mesylarnino group, or N,N-dimethylsulfamoylarnino group, provided that when Zx' contains hydroxyl group, the hydroxyl group may be protected with Rp^1 , and when Zx' contains amino group, the amino group may be protected with Rp^2 ,

Rs' is $\cdot\text{D}-\text{Rx}'$ or $\cdot\text{N}(\text{Ry}')(\text{Rz}')$, D is oxygen atom or sulfur atom, Rx' is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-cyclopentylethyl group, 2-cyclohexylethyl group, or Rb or Rc, Q in Rb is phenyl group, thiienyl group, furyl group, pyridyl group, oxazolyl group, naphthyl group, tetrahydronaphthyl group, indanyl group, indolyl group, or dihydrobenzodioxyl

group, A² is a single bind, oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)- (provided that when A² is oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)-, A¹ is ethylene), R² and R³ independently represent hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, dimethylamino group, acetylamino group, or methylsulfonylamino group (provided that when Q is phenyl group, A¹ is a single bind or unsubstituted methylene, and A² is a single bind, one of R² and R³ is a substituent other than hydrogen atom), p in R_c is an integer of 2 or 3, A⁴ is a single bind or methylene, A⁵ is -C(O)-, -C(S)-, or -S(O)₂-, R_d is hydrogen atom, or methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, cyclopropyl group, cyclopropylmethyl group, cyclopentyl group, cyclopentylmethyl group, cyclohexyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, or pyridin-4-yl group, R_e is methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, cyclopentylmethyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, phenylmethyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, pyridin-4-yl group, furan-2-yl group, furan-3-yl group, thiophen-2-yl group, thiophen-3-yl group, methoxy group, ethoxy group, propyloxy group, isopropyloxy group, butyloxy group, isobutyloxy group, t-butyloxy group, cyclopropyloxy group, cyclopentyloxy group, cyclohexyloxy group, cyclopentylmethoxy group, cyclohexylmethoxy group, phenoxy group, 4-methylphenoxy group, 4-chlorophenoxy group, 4-fluorophenoxy group, thiomethoxy group, amino group, N-methylamino group, N,N-dimethylamino group, N-ethylamino group, N,N-diethylamino group, N-propylamino group, N-

isopropylamino group, N-butylamino group, N-isobutylamino group, N-t-butylamino group, N-cyclopropylamino group, N-cyclopentylamino group, N-cyclohexylamino group, N-phenylamino group, N-(4-methylphenyl)amino group, N-(4-chlorophenyl)amino group, N-(4-fluorophenyl)amino group, N-(pyridin-2-yl)amino group, N-(pyridin-3-yl)amino group, N-(pyridin-4-yl)amino group, N-(furan-2-yl)amino group, N-(furan-3-yl)amino group, N-(thiophen-2-yl)amino group, N-(thiophen-3-yl)amino group, pyrrolidino group, piperidino group, morpholino group, methyloxycarbonylamino group, or ethyloxycarbonylamino group, Rz is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-

dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenoxyethyl group, 2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group, 2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, 2-(N-ethyl-N-phenylamino)ethyl group, isobutyryl group, isopropylthiocarbonyl group, isopropylsulfonyl group, valeryl group, butylthiocarbonyl group, isovaleryl group, isobutylthiocarbonyl group, pivaloyl group, t-butylthiocarbonyl group, cyclopropylcarbonyl group, cyclopropylthiocarbonyl group, cyclopentylcarbonyl group, cyclopentylthiocarbonyl group, cyclohexylcarbonyl group, cyclohexylthiocarbonyl group, cyclopentylmethylcarbonyl group, cyclopentylmethylthiocarbonyl group, cyclohexylmethylcarbonyl group, cyclohexylmethylthiocarbonyl group, benzoyl group, thiobenzoyl group, phenylsulfonyl group, 4-methylphenylcarbonyl group, 4-methylphenylthiocarbonyl group, 4-methylphenylsulfonyl group, 4-chlorophenylcarbonyl group, 4-chlorophenylthiocarbonyl group, 4-fluorophenylcarbonyl group, 4-fluorophenylthiocarbonyl group, isopropyloxycarbonyl group, N-isopropylcarbamoyl group, N-isopropylthiocarbamoyl

group, butyloxycarbonyl group, N-butyloxycarbonyl group, N-butylcarbamoyl group, N-isobutyloxycarbonyl group, N-isobutyloxycarbonyl group, N-isobutyloxycarbonyl group, N-isobutylthiocarbamoyl group, N-t-butyloxycarbonyl group, N-t-butyloxycarbonyl group, N-t-butylthiocarbamoyl group, cyclopropyloxycarbonyl group, N-cyclopropylthiocarbamoyl group, cyclopentyloxycarbonyl group, N-cyclopentyloxycarbonyl group, N-cyclopentylthiocarbamoyl group, cyclohexyloxycarbonyl group, N-cyclohexylthiocarbamoyl group, N-cyclohexylthiocarbamoyl group, N-cyclohexylthiocarbamoyl group, cyclohexylmethyloxycarbonyl group, cyclohexylmethyloxycarbonyl group, phenyloxycarbonyl group, N-phenylcarbamoyl group, N-phenylthiocarbamoyl group, 4-methylphenyloxycarbonyl group, N-(4-methylphenyl)carbamoyl group, N-(4-methylphenyl)thiocarbamoyl group, 4-chlorophenyloxycarbonyl group, N-(4-chlorophenyl)carbamoyl group, N-(4-chlorophenyl)thiocarbamoyl group, 4-fluorophenyloxycarbonyl group, N-(4-fluorophenyl)carbamoyl group, N-(4-fluorophenyl)thiocarbamoyl group, (pyrrolidino-1-yl)carbonyl group, (piperidino-1-yl)carbonyl group, or (morpholino-4-yl)carbonyl group, Ry is hydrogen atom, methyl group, ethyl group or isobutyl group, or binds to Rz to form pyrrolidino group, piperidino group, piperazino group, morpholino group, pyrrol-1-yl group, imidazol-1-yl group, or pyrazol-1-yl group together with the nitrogen atom, provided that when -D-Rx' or -N(Ry')(Rz') contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when -D-Rx' or -N(Ry')(Rz') contains amino group, the amino group may be protected with Rp²,

G is chlorine atom, bromine atom, iodine atom, or triflate group, and Y' is methyl group or ethyl group.

(104) The compound according to (102) or (103) mentioned above, wherein, in the formula (II), n is an integer of 2, Rs' binds to C⁹ in the aromatic ring (E'), Rs' is -O-Rx', and Y' is methyl group or ethyl group.

(105) The compound according to (94) mentioned above, wherein, in the formula (II),
n is an integer of 2,

C^{2'} is a ring-constituting carbon atom to which G binds, C^{3'} is a ring-constituting carbon atom to which R^{s'} binds, C^{4'} may be replaced with V', C^{5'} and C^{6'} are unsubstituted ring-constituting carbon atoms,

V' is nitrogen atom, or carbon atom substituted with Zx', Zx' is fluorine atom, methyl group, hydroxyl group, amino group, N-methylamino group, or N,N-dimethylamino group, provided that when Zx' contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when Zx' contains amino group, the amino group may be protected with Rp²,

R^{s'} is -O-Rx', Rx' is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-

chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxyethyl group, 2-(3-chlorophenoxyethyl group, 2-(4-chlorophenoxyethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, or 2-(N-ethyl-N-phenylamino)ethyl group,

G is bromine atom or iodine atom, and

Y' is methyl group or ethyl group.

(106) The compound according to (102) or (103) mentioned above, wherein, in the formula (II), n is an integer of 2, R_{s'} binds at the position of C^{4'} in the aromatic ring (E'), R_{s'} is -O-Rx', and Y' is methyl group or ethyl group.

(107) The compound according to (94) mentioned above, wherein, in the formula (II), n is an integer of 2,

C^{2'} is a ring-constituting carbon atom to which G binds, C^{4'} is a ring-

constituting carbon atom to which Rs' binds, C^{6'} may be replaced with V', C^{3'} and C^{5'} are unsubstituted ring-constituting carbon atoms,

V' is nitrogen atom, or carbon atom substituted with Zx', Zx' is fluorine atom, methyl group, hydroxyl group, amino group, N-methylamino group, or N,N-dimethylamino group, provided that when Zx' contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when Zx' contains amino group, the amino group may be protected with Rp²,

Rs' is -O-Rx', Rx' is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-

dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group, 2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, or 2-(N-ethyl-N-phenylamino)ethyl group,

G is bromine atom or iodine atom, and

Y' is methyl group or ethyl group.

(108) The compound according to (102) or (103) mentioned above, wherein, in the formula (II), n is an integer of 2, Rs' binds at the position of C^{g'} in the aromatic ring (E'), Rs' is ·O-Rx', and Y' is methyl group or ethyl group.

(109) The compound according to (94) mentioned above, wherein, in the formula (II), G binds to C^{g'} in the aromatic ring (E'), Rs' binds to C^{g'} or C^{g''} in the aromatic ring (E'), and all of C^{g'}, C^{g''}, C^{g'''}, C^{g''''} and C^{g'''''} in the aromatic ring (E') are not replaced with V'.

(110) The compound according to (109) mentioned above, wherein, in the formula (II), n is an integer of 2, Rs' binds to C^{g'} in the aromatic ring (E'), and Rs' is ·O-Rx'.

(111) The compound according to (94) mentioned above, wherein, in the formula (II),
n is an integer of 2,

C^{3'} is carbon atom to which G binds, C^{5'} is carbon atom to which Rs' binds,
C^{2'}, C^{4'}, and C^{6'} are unsubstituted ring-constituting carbon atoms,
Rs' is -O-Rx', Rx' is butyl group, isobutyl group, 2-ethylbutyl group,
cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group,
cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-
fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl
group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-
methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group,
5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group,
4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group,
5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group,
4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl
group, 5,8-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl
group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-
chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl
group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-
methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-
dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl
group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-
chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl
group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-
difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-
dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-
dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-
dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-

(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group, 2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group or 2-(N-ethyl-N-phenylamino)ethyl group,

G is bromine atom or iodine atom, and

Y' is methyl group or ethyl group.

(112) The compound according to (109) mentioned above, wherein, in the formula (II), n is an integer of 2, Rs' binds to C^q in the aromatic ring (E'), and Rs' is -O-Rx'.

(113) The compound according to (94) mentioned above, wherein, in the formula (II), G binds to C^q in the aromatic ring (E'), Rs' binds to C^q in the aromatic ring (E'), and C^q is V'.

(114) The compound according to (113) mentioned above, wherein, in the formula (II), n is an integer of 2, V' is carbon atom substituted with Zx', and Rs' is -O-Rx'.

(115) The compound according to (94) mentioned above, wherein, in the formula (II), n is an integer of 2,

C^q is carbon atom to which G binds, C^q is a carbon atom to which Rs' binds,

C^q is carbon atom substituted with Zx', C^q and C^q are unsubstituted ring constituting carbon atoms,

Zx' is fluorine atom, methyl group, hydroxyl group, amino group, N-methylamino group, or N,N-dimethylamino group, provided that when Zx' contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when Zx' contains amino group, the amino group may be protected with Rp²,

Rs' is -O-Rx', Rx' is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-

(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxyethyl group, 2-(3-chlorophenoxyethyl group, 2-(4-chlorophenoxyethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, or 2-(N-ethyl-N-phenylamino)ethyl group,

G is bromine atom or iodine atom, and

Y' is methyl group or ethyl group.

(116) The compound according to (94) mentioned above, wherein, in the formula (II), G binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is nitrogen atom, and C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms.

(117) The compound according to (116) mentioned above, wherein, in the formula (II), n is an integer of 2, and Rs' is ·O·Rx'.

(118) The compound according to (94) mentioned above, wherein, in the formula (II), n is an integer of 2,

C^{3'} is carbon atom to which G binds, C^{4'} is carbon atom to which Rs' binds, C^{5'} is nitrogen atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, Rs' is ·O·Rx', Rx' is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-

fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-

(trifluoromethyl)phenyllethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group, 2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, or 2-(N-ethyl-N-phenylamino)ethyl group,

G is bromine atom or iodine atom, and

Y' is methyl group or ethyl group.

(119) The compound according to (94) mentioned above, wherein, in the formula (II), G binds to C^{3'} in the aromatic ring (E'), R's binds to C^{4'} in the aromatic ring (E'), C^{6'} is a ring-constituting carbon atom substituted with Zx', or an unsubstituted ring-constituting carbon atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, R's is -D-Rx', and D is a single bind, sulfur atom, -S(O)-, -S(O)₂-, or -C(O)-.

(120) The compound according to (94) mentioned above, wherein, in the formula (II), n is an integer of 2,

C^{3'} is carbon atom to which G binds, C^{4'} is a carbon atom to which R's binds, C^{6'} is a ring-constituting carbon atom substituted with Zx', or an unsubstituted ring-constituting carbon atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms,

Zx' is fluorine atom, methyl group, hydroxyl group, amino group, N-methylamino group, or N,N-dimethylamino group, provided that when Zx' contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when Zx' contains amino group, the amino group may be protected with Rp²,

R's is -S-Rx', Rx' is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl

group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group,

(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group, 2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, or 2-(N-ethyl-N-phenylamino)ethyl group,

G is bromine atom or iodine atom, and

Y' is methyl group or ethyl group.

(121) The compound according to (94) mentioned above, wherein, in the formula (II), G binds to C^{3'} in the aromatic ring (E'), R^{s'} binds to C^{4'} in the aromatic ring (E'), C^{5'} is a ring-constituting carbon atom substituted with Zx', or an unsubstituted ring-constituting carbon atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, and R^{s'} is -N(R^{y'})(R^{z'}).

(122) The compound according to (94) mentioned above, wherein, in the formula (II), n is an integer of 2,

C^{3'} is carbon atom to which G binds, C^{4'} is a carbon atom to which R^{s'} binds, C^{5'} is a ring-constituting carbon atom substituted with Zx', or an unsubstituted ring-constituting carbon atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms,

Zx' is fluorine atom, methyl group, hydroxyl group, amino group, N-methylamino group, or N,N-dimethylamino group, provided that when Zx' contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when Zx' contains amino group, the amino group may be protected with Rp²,

R^{s'} is -N(R^{y'})(R^{z'}), R^{z'} is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-

methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group,

2-phenoxyethyl group, 2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group, 2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, 2-(N-ethyl-N-phenylamino)ethyl group, isobutyryl group, isopropylthiocarbonyl group, isopropylsulfonyl group, valeryl group, butylthiocarbonyl group, isovaleryl group, isobutylthiocarbonyl group, pivaloyl group, t-butylthiocarbonyl group, cyclopropylcarbonyl group, cyclopropylthiocarbonyl group, cyclopentylcarbonyl group, cyclopentylthiocarbonyl group, cyclohexylcarbonyl group, cyclohexylthiocarbonyl group, cyclopentylmethylcarbonyl group, cyclopentylmethylthiocarbonyl group, cyclohexylmethylcarbonyl group, cyclohexylmethylthiocarbonyl group, benzoyl group, thiobenzoyl group, phenylsulfonyl group, 4-methylphenylcarbonyl group, 4-methylphenylthiocarbonyl group, 4-methylphenylsulfonyl group, 4-chlorophenylcarbonyl group, 4-chlorophenylthiocarbonyl group, 4-fluorophenylcarbonyl group, 4-fluorophenylthiocarbonyl group, isopropoxy carbonyl group, N-isopropylcarbamoyl group, N-isopropylthiocarbamoyl group, butyloxycarbonyl group, N-butyloxycarbonyl group, N-butyloxylthiocarbonyl group, isobutyloxycarbonyl group, N-isobutyloxycarbonyl group, N-isobutyloxylthiocarbonyl group, t-butyloxycarbonyl group, N-t-butyloxycarbonyl group, N-t-butyloxylthiocarbonyl group, cyclopropylcarbonyl group, N-cyclopropylthiocarbonyl group, cyclopentylcarbonyl group, N-cyclopentylthiocarbonyl group, N-cyclopentylthiocarbamoyl group, cyclohexyloxycarbonyl group, N-cyclohexyloxycarbonyl group, N-cyclohexylcarbonyl group, N-cyclohexylthiocarbonyl group, cyclopentylmethoxycarbonyl group, cyclohexylmethoxycarbonyl group, phenoxy carbonyl group, N-phenylcarbamoyl group, N-phenylthiocarbamoyl group, 4-methylphenoxy carbonyl group, N-(4-methylphenyl)carbamoyl group, N-(4-methylphenyl)thiocarbamoyl group, 4-chlorophenoxy carbonyl group, N-(4-

chlorophenyl)carbamoyl group, N-(4-chlorophenyl)thiocarbamoyl group, 4-fluorophenoxy carbonyl group, N-(4-fluorophenyl)carbamoyl group, N-(4-fluorophenyl)thiocarbamoyl group, (pyrrolidino-1-yl)carbonyl group, (piperidino-1-yl)carbonyl group, or (morpholino-4-yl)carbonyl group, Ry' is hydrogen atom, methyl group, ethyl group or isobutyl group, or binds to Rz' to form pyrrolidino group, piperidino group, or morpholino group together with nitrogen atom to which they binds, provided that when -N(Ry')(Rz') contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when -N(Ry')(Rz') contains amino group, the amino group may be protected with Rp²,

G is bromine atom or iodine atom, and

Y' is methyl group or ethyl group.

(123) The compound according to (94) mentioned above, wherein, in the formula (II), n is an integer of 2, G binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is carbon atom substituted with -N(Rn¹)(Rn²) group (provided that one of Rn¹ and Rn² is a substituent other than hydrogen atom), C^{3'} and C^{5'} are unsubstituted ring constituting carbon atoms, and Rs' is -O-Rx'.

(124) The compound according to (94) mentioned above, wherein, in the formula (II), n is an integer of 2,

C^{3'} is carbon atom to which G binds, C^{4'} is carbon atom to which Rs' binds, C^{5'} is carbon atom substituted with Zx', C^{2'} and C^{6'} are unsubstituted ring constituting carbon atoms,

Zx' is N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino group, N,N-dimethylamino group, N,N-diethylamino group, formylamino group, acetylamino group, carbamoylamino group, mesylamino group, or N,N-dimethylsulfamoylamino group, provided that when Zx' contains amino group, the amino group may be protected with Rp²,

Rs' is -O-Rx', Rx' is butyl group, isobutyl group, 2-ethylbutyl group,

cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl

group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxyethyl group, 2-(3-chlorophenoxyethyl group, 2-(4-chlorophenoxyethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, or 2-(N-ethyl-N-phenylamino)ethyl group,

G is bromine atom or iodine atom, and

Y' is methyl group or ethyl group.

(125) The compound according to (94) mentioned above, wherein, in the formula (II), G binds to C^{3'} in the aromatic ring (E'), R^s' binds to C^{4'} in the aromatic ring (E'), C^{5'} is a ring-constituting carbon atom substituted with Zx', or an unsubstituted ring-constituting carbon atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, R^s' is -D-Rx', and Rx' has the same meaning as Rc, provided that when Rc contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when Rc contains amino group, the amino group may be protected with Rp².

(126) The compound according to (94) mentioned above, wherein, in the formula (II), n is an integer of 2,

C^{3'} is carbon atom to which G binds, C^{4'} is a carbon atom to which R^s' binds, C^{5'} is a ring-constituting carbon atom substituted with Zx', or an unsubstituted ring-constituting carbon atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms,

Zx' is fluorine atom, methyl group, hydroxyl group, amino group, N-methylamino group, or N,N-dimethylamino group, provided that when Zx' contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when Zx' contains amino group, the amino group may be protected with Rp²,

Rs' is -O-Rx', Rx' has the same meaning as Rc, provided that when Rc contains hydroxyl group, the hydroxyl group may be protected with Rp¹, p in Rc is an integer of 2, A⁴ is a single bind or methylene, A⁵ is -C(O)-, -C(S)-, or -S(O)₂-, Rd is methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, or 4-fluorophenylmethyl group, Re is isopropyl group, butyl group, isobutyl group, t-butyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, cyclopentylmethyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, propyloxy group, isopropyloxy group, butyloxy group, isobutyloxy group, t-butyloxy group, cyclopropoxy group, cyclopentyloxy group, cyclohexyloxy group, cyclopentylmethoxy group, cyclohexylmethoxy group, phenoxy group, 4-methylphenoxy group, 4-chlorophenoxy group, 4-fluorophenoxy group, N-propylamino group, N-isopropylamino group, N-butylamino group, N-isobutylamino group, N-t-butylamino group, N-cyclopropylamino group, N-cyclopentylamino group, N-cyclohexylamino group, N-phenylamino group, N-(4-methylphenyl)amino group, N-(4-chlorophenyl)amino group, N-(4-fluorophenyl)amino group, pyrrolidino group, piperidino group, or morpholino group,

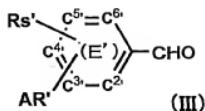
G is bromine atom or iodine atom, and

Y' is methyl group or ethyl group.

(127) The compound according to (94) mentioned above, wherein, in the formula (II), G binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is a ring-constituting carbon atom substituted with Zx', or an unsubstituted ring-constituting carbon atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, Rs' is -O-Rx', and Rx' is a linear or branched saturated alkyl group having 3 to 8 carbon atoms, or Ra or Rb.

(128) The compound according to (94) mentioned above, wherein, in the formula (II), n is an integer of 2, G binds to C⁹ in the aromatic ring (E'), Rs' binds to C⁴ in the aromatic ring (E'), C^{5'} is carbon atom substituted with nitro group, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, and Rs' is -O-Rx'.

(129) A compound represented by the following formula (III):



[In the formula, C^{2'}, C^{3'}, C^{4'}, C^{5'} and C^{6'} in the aromatic ring (E') represent a ring-constituting carbon atom, any one of these atoms to which Rs' and AR' does not bind may be replaced with V', and AR' has the same meaning as that of AR, provided that when AR contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when AR contains amino group, the amino group may be protected with Rp².].

(130) The compound according to (129) mentioned above, wherein, in the formula (III), AR' binds to the atom of C^{2'} or C^{3'} in the aromatic ring (E').

(131) The compound according to (129) or (130) mentioned above, wherein, in the formula (III), AR' is a residue of naphthalene, benzofuran, benzob[b]thiophene, indole, benzothiazole, dihydro-3H-benzothiazole, quinoline, dihydro-1H-quinoline, benzo[d]isothiazole, 1H-indazole, benzo[c]isothiazole, 2H-indazole, imidazo[1,2-a]pyridine, 1H-pyrrolo[2,3-b]pyridine, isoquinoline, dihydro-2H-isoquinoline, cinnoline, quinazoline, quinoxaline, 1H-benzimidazole, benzoxazole, 1H-pyrrolo[3,2-b]pyridine, benzo[1,2,5]thiadiazole, 1H-benzotriazole, 1,3-dihydropyrrrolo[2,3-b]pyridine, 1,3-dihydrobenzimidazole, dihydro-3H-benzoxazole, phthalazine, [1,8]naphthalidine, [1,5]naphthalidine, 1H-pyrrolo[3,2-c]pyridine, 1H-pyrrolo[2,3-

c]pyridine, 1H-pyrazolo[4,3-b]pyridine, 1H-pyrazolo[4,3-c]pyridine, 1H-pyrazolo[3,4-c]pyridine, 1H-pyrazolo[3,4-b]pyridine, [1,2,4]triazolo[4,3-a]pyridine, thieno[3,2-c]pyridine, thieno[3,2-b]pyridine, 1H-thieno[3,2-c]pyrazole, benzo[d]isoxazole, benzo[c]isoxazole, indolizine, 1,3-dihydroindole, 1H-pyrazolo[3,4-d]thiazole, 2H-isoindole, [1,2,4]triazolo[1,5-a]pyrimidine, 1H-pyrazolo[3,4-b]pyrazine, 1H-imidazo[4,5-b]pyrazine, 7H-purine, or 4H-chromene (the aforementioned residue may be substituted with one of X_a or two or more of the same or different X_a, when AR' contains hydroxyl group, the hydroxyl group may be protected with R^{p1}, and when AR' contains amino group, the amino group may be protected with R^{p2}).

(132) The compound according to (129) or (130) mentioned above, wherein, in the formula (III), AR' is naphthalen-2-yl group, naphthalen-1-yl group, benzofuran-5-yl group, benzofuran-4-yl group, benzofuran-2-yl group, benzo[b]thiophen-5-yl group, benzo[b]thiophen-4-yl group, benzo[b]thiophen-2-yl group, indol-5-yl group, indol-4-yl group, indol-6-yl group, benzothiazol-6-yl group, benzothiazol-7-yl group, benzothiazol-5-yl group, benzothiazol-4-yl group, dihydro-3H-benzothiazol-6-yl group, dihydro-3H-benzothiazol-7-yl group, dihydro-3H-benzothiazol-5-yl group, dihydro-3H-benzothiazol-4-yl group, quinolin-6-yl group, quinolin-3-yl group, quinolin-5-yl group, quinolin-7-yl group, dihydro-1H-quinolin-6-yl group, dihydro-1H-quinolin-5-yl group, benzo[d]isothiazol-5-yl group, benzo[d]isothiazol-4-yl group, benzo[d]isothiazol-6-yl group, benzo[d]isothiazol-7-yl group, 1H-indazol-5-yl group, 1H-indazol-4-yl group, 1H-indazol-6-yl group, benzo[c]isothiazol-5-yl group, benzo[c]isothiazol-4-yl group, benzo[c]isothiazol-6-yl group, benzo[c]isothiazol-7-yl group, 2H-indazol-5-yl group, 2H-indazol-4-yl group, 2H-indazol-6-yl group, imidazo[1,2-a]pyridin-6-yl group, imidazo[1,2-a]pyridin-7-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1H-pyrrolo[2,3-b]pyridin-4-yl group, isoquinolin-6-yl group, isoquinolin-3-yl group, isoquinolin-5-yl group, isoquinolin-7-yl group, dihydro-2H-isoquinolin-6-yl group, dihydro-2H-isoquinolin-5-yl group, cinnolin-6-yl group,

cinnolin-5-yl group, quinazolin-6-yl group, quinazolin-7-yl group, quinazolin-5-yl group, quinoxalin-2-yl group, quinoxalin-6-yl group, quinoxalin-5-yl group, 1H-benzimidazol-5-yl group, 1H-benzimidazol-4-yl group, benzoxazol-5-yl group, benzoxazol-6-yl group, benzoxazol-4-yl group, benzoxazol-7-yl group, 1H-pyrrolo[3,2-b]pyridin-5-yl group, 1H-pyrrolo[3,2-b]pyridin-6-yl group, benzo[1,2,5]thiadiazol-5-yl group, benzo[1,2,5]thiadiazol-4-yl group, 1H-benzotriazol-5-yl group, 1H-benzotriazol-4-yl group, 1,3-dihydrodipyrrolo[2,3-b]pyridin-5-yl group, 1,3-dihydrodipyrrolo[2,3-b]pyridin-4-yl group, 1,3-dihydrobenzimidazol-5-yl group, 1,3-dihydrobenzimidazol-4-yl group, dihydro-3H-benzoxazol-6-yl group, dihydro-3H-benzoxazol-7-yl group, dihydro-3H-benzoxazol-5-yl group, dihydro-3H-benzoxazol-4-yl group, phthalazin-6-yl group, phthalazin-5-yl group, [1,8]naphthalidin-3-yl group, [1,8]naphthalidin-4-yl group, [1,5]naphthalidin-3-yl group, [1,5]naphthalidin-4-yl group, 1H-pyrrolo[3,2-c]pyridin-6-yl group, 1H-pyrrolo[3,2-c]pyridin-5-yl group, 1H-pyrrolo[2,3-c]pyridin-4-yl group, 1H-pyrazolo[4,3-b]pyridin-5-yl group, 1H-pyrazolo[4,3-b]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-4-yl group, 1H-pyrazolo[3,4-c]pyridin-5-yl group, 1H-pyrazolo[3,4-c]pyridin-4-yl group, 1H-pyrazolo[3,4-b]pyridin-5-yl group, 1H-pyrazolo[3,4-b]pyridin-4-yl group, [1,2,4]triazolo[4,3-a]pyridin-6-yl group, [1,2,4]triazolo[4,3-a]pyridin-7-yl group, thieno[3,2-c]pyridin-2-yl group, thieno[3,2-c]pyridin-3-yl group, thieno[3,2-c]pyridin-6-yl group, thieno[3,2-b]pyridin-2-yl group, thieno[3,2-b]pyridin-3-yl group, thieno[3,2-b]pyridin-5-yl group, thieno[3,2-b]pyridin-6-yl group, 1H-thieno[3,2-c]pyrazol-5-yl group, 1H-thieno[3,2-c]pyrazol-4-yl group, benzo[d]isoxazol-5-yl group, benzo[d]isoxazol-4-yl group, benzo[d]isoxazol-6-yl group, benzo[d]isoxazol-7-yl group, benzo[c]isoxazol-5-yl group, benzo[c]isoxazol-4-yl group, benzo[c]isoxazol-6-yl group, benzo[c]isoxazol-7-yl group, indolizin-7-yl group, indolizin-6-yl group, indolizine-8-yl group, 1,3-dihydroindol-5-

yl group, 1,3-dihydroindol-4-yl group, 1,3-dihydroindol-6-yl group, 1H-pyrazolo[3,4-d]thiazol-5-yl group, 2H-isoindol-5-yl group, 2H-isoindol-4-yl group, [1,2,4]triazolo[1,5-a]pyrimidin-6-yl group, 1H-pyrazolo[3,4-b]pyrazin-5-yl group, 1H-imidazo[4,5-b]pyrazin-5-yl group, 7H-purin-2-yl group, 4H-chromen-6-yl group, or 4H-chromen-5-yl group (the aforementioned groups may be substituted with one of X_a or two or more of the same or different X_a, when AR' contains hydroxyl group, the hydroxyl group may be protected with R_{p1}, and when AR' contains amino group, the amino group may be protected with R_{p2}).

(133) The compound according to (129) or (130) mentioned above, wherein, in the formula (III), AR' is a residue of naphthalene, benzofuran, benzo[b]thiophene, indole, benzothiazole, dihydro-3H-benzothiazole, quinoline, dihydro-1H-quinoline, benzo[d]isothiazole, 1H-indazole, benzoc[cl]isothiazole, 2H-indazole, imidazo[1,2-a]pyridine, 1H-pyrrolo[2,3-b]pyridine, isoquinoline, or dihydro-2H-isoquinoline (the aforementioned residue may be substituted with one of X_a or two or more of the same or different X_a, when AR' contains hydroxyl group, the hydroxyl group may be protected with R_{p1}, and when AR' contains amino group, the amino group may be protected with R_{p2}).

(134) The compound according to (129) or (130) mentioned above, wherein, in the formula (III), AR' is a residue of cinnoline, quinazoline, quinoxaline, 1H-benzimidazole, benzoxazole, 1H-pyrrolo[3,2-b]pyridine, benzo[1,2,5]thiadiazole, 1H-benzotriazole, 1,3-dihydropyrrolo[2,3-b]pyridine, 1,3-dihydrobenzimidazole, dihydro-3H-benzoxazole, phthalazine, [1,8]naphthalidine, [1,5]naphthalidine, 1H-pyrrolo[3,2-c]pyridine, 1H-pyrrolo[2,3-c]pyridine, 1H-pyrazolo[4,3-b]pyridine, 1H-pyrazolo[4,3-c]pyridine, 1H-pyrazolo[3,4-c]pyridine, 1H-pyrazolo[3,4-b]pyridine, [1,2,4]triazolo[4,3-a]pyridine, thieno[3,2-c]pyridine, thieno[3,2-b]pyridine, 1H-thieno[3,2-c]pyrazole, benzo[d]isoxazole, benzo[c]isoxazole, indolizine, 1,3-dihydroindole, 1H-pyrazolo[3,4-d]thiazole, 2H-isoindole, [1,2,4]triazolo[1,5-

alpyrimidine, 1H-pyrazolo[3,4-b]pyrazine, 1H-imidazo[4,5-b]pyrazine, 7H-purine, or 4H-chromene (the aforementioned residue may be substituted with one of X_a or two or more of the same or different X_a, when AR' contains hydroxyl group, the hydroxyl group may be protected with R^{p1}, and when AR' contains amino group, the amino group may be protected with R^{p2}).

(135) The compound according to any one of (129) to (134) mentioned above, wherein, in the formula (III), R^s is ·O·Rx'.

(136) The compound according to any one of (129) to (135) mentioned above, wherein, in the formula (III), R^s is ·D·Rx' or ·N(Ry')(Rz'), D is a single bind, oxygen atom, sulfur atom, ·S(O)·, ·S(O)₂·, or ·C(O)·, Rx' is a linear or branched saturated alkyl group having 3 to 8 carbon atoms, or Ra, Rb, or Rc, k in Ra is 0 or an integer of 1 to 3, R¹ is a saturated cyclic alkyl group having 3 to 7 carbon atoms or a condensed saturated cyclic alkyl group having 6 to 8 carbon atoms, R¹ may be substituted with one of lower alkyl group having 1 to 4 carbon atoms or two or more of the same or different lower alkyl groups having 1 to 4 carbon atoms, Q in Rb is phenyl group, thienyl group, furyl group, pyrrolyl group, pyridyl group, oxazolyl group, isoxazolyl group, thiazolyl group, isothiazolyl group, imidazolyl group, pyrazolyl group, oxadiazolyl group, thiadiazolyl group, triazolyl group, tetrazolyl group, naphthyl group, tetrahydronaphthyl group, indanyl group, indenyl group, quinolyl group, isoquinolyl group, indolyl group, benzofuryl group, benzothienyl group, benzimidazolyl group, benzoxazolyl group, benzothiazolyl group, indazolyl group, 4H-chromenyl group, dihydrobenzodioxyl group, benzoisoxazolyl group, pyrrolopyridinyl group, pyrazolopyridinyl group, triazolopyridinyl group, thienopyridinyl group, thienopyrazolyl group, 1,3-dihydrobenzimidazole group, dihydro-3H-benzoxazole group, or dihydro-3H-benzothiazole group, which binds to A² at an arbitrary position on the ring, A¹ is a single bind or an alkylene (a) having 1 to 3 carbon atoms, the alkylene (a) may be substituted with a lower alkyl group

having 1 to 4 carbon atoms or phenyl group may be substituted with, A² is a single bind, oxygen atom, sulfur atom, -S(O)-, -S(O)₂-, or -N(R⁴)- (provided that when A² is oxygen atom, sulfur atom, -S(O)-, -S(O)₂-, or -N(R⁴)-, A¹ is ethylene or trimethylene), R² and R³ independently represent hydrogen atom, a linear or branched saturated alkyl group having 1 to 4 carbon atoms, oxo group, thioxo group, fluorine atom, chlorine atom, bromine atom, trifluoromethyl group, -OR⁵, -N(R⁶)(R⁶), -NHCOR⁷, -NHSO₂R⁸, or -A⁶-Qa, or they binds to each other to form methylenedioxy group, Qa is phenyl group, pyridyl group, oxazolyl group, isoxazolyl group, thiazolyl group, isothiazolyl group, imidazolyl group, pyrazolyl group, oxadiazolyl group, thiadiazolyl group, triazolyl group, tetrazolyl group, naphthyl group, indanyl group, indenyl group, quinolyl group, isoquinolyl group, indolyl group, benzofuryl group, benzothienyl group, benzimidazolyl group, benzoxazolyl group, benzothiazolyl group, or indazolyl group, which may be substituted with one of T¹ or two or more of the same or different T¹, and binds to A⁶ at an arbitrary position on the ring, R⁴ and R⁶ independently represent hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms, R⁵ and R⁷ independently represent hydrogen atom, a lower alkyl group having 1 to 4 carbon atoms, or -A⁶-Qa, R⁸ is a lower alkyl group having 1 to 4 carbon atoms, R⁶ has the same meaning as R⁶, or binds to R⁶ to form a 3- to 6-membered ring together with the nitrogen atom to which they bind to form a saturated nitrogen-containing alkyl group or morpholino group, p in R_c is an integer of 2 to 4, A⁴ is a single bind or methylene or ethylene, A⁵ is -C(O)-, -C(S)-, or -S(O)₂-, R_d is hydrogen atom, an alkyl group having 1 to 8 carbon atoms, or Qa, R_e is an alkyl group having 1 to 8 carbon atoms, -A⁶-Qa, -(CH₂)_iR¹⁴, -OR²⁸, -SR²⁸, or -N(R²⁹)(R³⁰), i is an integer of 1 to 3, R¹⁴ is hydroxyl group, an alkoxy group having 1 to 4 carbon atoms, carboxyl group, or an N,N-dialkylcarbamoyl group having 1 to 4 carbon atoms, R²⁸ is an alkyl group having 1

to 8 carbon atoms or ·A⁶-Qa, R²⁹ is an alkyl group having 1 to 8 carbon atoms, an alkoxy carbonyl group having 1 to 4 carbon atoms, or ·A⁶-Qa, R³⁰ is hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms, or binds to R²⁹ to form a 3- to 6-membered ring together with the nitrogen atom to which they bind to form a saturated nitrogen-containing alkyl group or morpholino group, Rz' has the same meaning as Rx', or represents ·A⁵-Re, Ry' is hydrogen atom, an alkyl group having 1 to 8 carbon atoms, or ·A⁶-Qp, or binds to Rz' to form a saturated or unsaturated nitrogen-containing cyclic substituent having 3 to 7 atoms, when ·D-Rx' or ·N(Ry')(Rz') contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when ·D-Rx' or ·N(Ry')(Rz') contains amino group, the amino group may be protected with Rp².

(137) The compound according to any one of (129) to (136) mentioned above, wherein, in the formula (III), Rs' is ·N(Ry')(Rz').

(138) The compound according to any one of (129) to (136) mentioned above, wherein, in the formula (III), Rs' is ·D-Rx', D is sulfur atom, ·S(O)·, ·S(O)₂·, or ·C(O)·.

(139) The compound according to (129) mentioned above, wherein, in the formula (III), AR' binds at the position of C² in the aromatic ring (E'), and Rs' binds to one of the ring-constituting carbon atoms C^{3'}, C^{4'}, and C^{5'}.

(140) The compound according to (129) mentioned above, wherein, in the formula (III), AR' binds to C², Rs' binds to any one of the atoms C^{3'}, C^{4'}, and C^{5'}, a ring-constituting carbon atom to which Rs' does not bind among C^{3'}, C^{4'}, and C^{5'} may be replaced with V',

V' is nitrogen atom, or carbon atom substituted with Zx', Zx' is one kind of group selected from the group consisting of fluorine atom, chlorine atom, bromine atom, nitro group, methyl group, hydroxyl group, methoxy group, amino group, N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino

group, N,N-dimethylamino group, N,N-diethylamino group, formylamino group, acetylamino group, carbamoylamino group, mesylamino group, and N,N-dimethylsulfamoylamino group, provided that when Zx' contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when Zx' contains amino group, the amino group may be protected with Rp²,

Rs' is -D-Rx' or -N(Ry')(Rz'), D is oxygen atom or sulfur atom, Rx' is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-cyclopentylethyl group, or 2-cyclohexylethyl group, or Rb or Rc, Q in Rb is phenyl group, thiienyl group, furyl group, pyridyl group, oxazolyl group, naphthyl group, tetrahydronaphthyl group, indanyl group, indolyl group, or dihydrobenzodioxyl group, A² is a single bind, oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)- (provided that when A² is oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)-, A¹ is ethylene), R² and R³ independently represent hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, dimethylamino group, acetylamino group, or methylsulfonylamino group (provided that when Q is phenyl group, A¹ is a single bind or unsubstituted methylene, and A² is a single bind, one of R² and R³ is a substituent other than hydrogen atom), p in Rc is an integer of 2 or 3, A⁴ is a single bind or methylene, A⁵ is -C(O)-, -C(S)-, or -S(O)₂-, Rd is hydrogen atom, or methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, cyclopropyl group, cyclopropylmethyl group, cyclopentyl group, cyclopentylmethyl group, cyclohexyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, or pyridin-4-yl group, Re is methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, cyclopentylmethyl

group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, phenylmethyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, pyridin-4-yl group, furan-2-yl group, furan-3-yl group, thiophen-2-yl group, thiophen-3-yl group, methoxy group, ethoxy group, propyloxy group, isopropyloxy group, butyloxy group, isobutyloxy group, t-butyloxy group, cyclopropyloxy group, cyclopentyloxy group, cyclohexyloxy group, cyclopentylmethoxy group, cyclohexylmethoxy group, phenoxy group, 4-methylphenoxy group, 4-chlorophenoxy group, 4-fluorophenoxy group, thiomethoxy group, amino group, N-methylamino group, N,N-dimethylamino group, N-ethylamino group, N,N-diethylamino group, N-propylamino group, N-isopropylamino group, N-butylamino group, N-isobutylamino group, N-t-butylamino group, N-cyclopropylamino group, N-cyclopentylamino group, N-cyclohexylamino group, N-phenylamino group, N-(4-methylphenyl)amino group, N-(4-chlorophenyl)amino group, N-(4-fluorophenyl)amino group, N-(pyridin-2-yl)amino group, N-(pyridin-3-yl)amino group, N-(pyridin-4-yl)amino group, N-(furan-2-yl)amino group, N-(furan-3-yl)amino group, N-(thiophen-2-yl)amino group, N-(thiophen-3-yl)amino group, pyrrolidino group, piperidino group, morpholino group, methyloxycarbonylamino group, or ethyloxycarbonylamino group, Rz' is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-

2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group, 2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, 2-(N-ethyl-N-phenylamino)ethyl group, isobutyryl group, isopropylthiocarbonyl group, isopropylsulfonyl group,

valeryl group, butylthiocarbonyl group, isovaleryl group, isobutylthiocarbonyl group, pivaloyl group, t-butylthiocarbonyl group, cyclopropylcarbonyl group, cyclopropylthiocarbonyl group, cyclopentylcarbonyl group, cyclopentylthiocarbonyl group, cyclohexylcarbonyl group, cyclohexylthiocarbonyl group, cyclopentylmethylcarbonyl group, cyclopentylmethylthiocarbonyl group, cyclohexylmethylcarbonyl group, cyclohexylmethylthiocarbonyl group, benzoyl group, thiobenzoyl group, phenylsulfonyl group, 4-methylphenylcarbonyl group, 4-methylphenylthiocarbonyl group, 4-methylphenylsulfonyl group, 4-chlorophenylcarbonyl group, 4-chlorophenylthiocarbonyl group, 4-fluorophenylcarbonyl group, 4-fluorophenylthiocarbonyl group, isopropoxy carbonyl group, N-isopropylcarbamoyl group, N-isopropylthiocarbamoyl group, butyloxycarbonyl group, N-butyloxycarbonyl group, N-butyloxycarbonyl group, isobutyloxycarbonyl group, N-isobutyloxycarbonyl group, N-isobutylthiocarbamoyl group, N-isobutylthiocarbamoyl group, t-butyloxycarbonyl group, N-t-butyloxycarbonyl group, N-t-butyloxycarbonyl group, N-t-butylthiocarbamoyl group, cyclopropoxy carbonyl group, N-cyclopropylthiocarbamoyl group, cyclopentyloxy carbonyl group, N-cyclopentylthiocarbamoyl group, N-cyclopentylthiocarbamoyl group, cyclohexyloxy carbonyl group, N-cyclohexylthiocarbamoyl group, cyclohexyl carbamoyl group, N-cyclohexylthiocarbamoyl group, cyclopentylmethoxy carbonyl group, cyclohexylmethoxy carbonyl group, phenyloxycarbonyl group, N-phenylcarbamoyl group, N-phenylthiocarbamoyl group, 4-methylphenyloxycarbonyl group, N-(4-methylphenyl)carbamoyl group, N-(4-methylphenyl)thiocarbamoyl group, 4-chlorophenyloxycarbonyl group, N-(4-chlorophenyl)thiocarbamoyl group, 4-fluorophenyloxycarbonyl group, N-(4-fluorophenyl)carbamoyl group, N-(4-fluorophenyl)thiocarbamoyl group, (pyrrolidino-1-yl)carbonyl group, (piperidino-1-yl)carbonyl group, or (morpholino-4-yl)carbonyl group, Ry' is hydrogen atom, methyl

group, ethyl group or isobutyl group, or binds to Rz' to form pyrrolidino group, piperidino group, piperazino group, morpholino group, pyrrol-1-yl group, imidazol-1-yl group or pyrazol-1-yl group together with the nitrogen atom, provided that when -D-Rx' or -N(Ry')(Rz') contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when -D-Rx' or -N(Ry')(Rz') contains amino group, the amino group may be protected with Rp²,

AR' is naphthalen-2-yl group, naphthalen-1-yl group, benzofuran-5-yl group, benzofuran-4-yl group, benzofuran-2-yl group, benzo[b]thiophen-5-yl group, benzo[b]thiophen-4-yl group, benzo[b]thiophen-2-yl group, indol-5-yl group, indol-4-yl group, indol-6-yl group, benzothiazol-6-yl group, benzothiazol-7-yl group, benzothiazol-5-yl group, benzothiazol-4-yl group, dihydro-3H-benzothiazol-6-yl group, dihydro-3H-benzothiazol-7-yl group, dihydro-3H-benzothiazol-5-yl group, dihydro-8H-benzothiazol-4-yl group, quinolin-6-yl group, quinolin-3-yl group, quinolin-5-yl group, quinolin-7-yl group, dihydro-1H-quinolin-6-yl group, dihydro-1H-quinolin-5-yl group, benzod[isothiazol-5-yl group, benzod[isothiazol-4-yl group, benzod[isothiazol-6-yl group, benzod[isothiazol-7-yl group, 1H-indazol-5-yl group, 1H-indazol-4-yl group, 1H-indazol-6-yl group, benzo[clisothiazol-5-yl group, benzo[clisothiazol-4-yl group, benzo[clisothiazol-6-yl group, benzo[clisothiazol-7-yl group, 2H-indazol-5-yl group, 2H-indazol-4-yl group, 2H-indazol-6-yl group, imidazo[1,2-alpyridin-6-yl group, imidazo[1,2-alpyridin-7-yl group, 1H-pyrrolo[2,3-blpyridin-5-yl group, 1H-pyrrolo[2,3-blpyridin-4-yl group, isoquinolin-6-yl group, isoquinolin-3-yl group, isoquinolin-5-yl group, isoquinolin-7-yl group, dihydro-2H-isoquinolin-6-yl group, dihydro-2H-isoquinolin-5-yl group, cinnolin-6-yl group, cinnolin-5-yl group, quinazolin-6-yl group, quinazolin-7-yl group, quinazolin-5-yl group, quinoxalin-2-yl group, quinoxalin-6-yl group, quinoxalin-5-yl group, 1H-benzimidazol-5-yl group, 1H-benzimidazol-4-yl group, benzoxazol-5-yl group, benzoxazol-6-yl group, benzoxazol-4-yl group, benzoxazol-7-yl group, 1H-

pyrrolo[3,2-b]pyridin-5-yl group, 1H-pyrrolo[3,2-b]pyridin-6-yl group,
benzo[1,2,5]thiadiazol-5-yl group, benzo[1,2,5]thiadiazol-4-yl group, 1H-
benzotriazol-5-yl group, 1H-benzotriazol-4-yl group, 1,3-dihydropyrrolo[2,3-
b]pyridin-5-yl group, 1,3-dihydropyrrolo[2,3-b]pyridin-4-yl group, 1,3-
dihydrobenzimidazol-5-yl group, 1,3-dihydrobenzimidazol-4-yl group, dihydro-3H-
benzoxazol-6-yl group, dihydro-3H-benzoxazol-7-yl group, dihydro-3H-benzoxazol-5-
yl group, dihydro-3H-benzoxazol-4-yl group, phthalazin-6-yl group, phthalazin-5-yl
group, [1,8]naphthalidin-3-yl group, [1,8]naphthalidin-4-yl group,
[1,5]naphthalidin-3-yl group, [1,5]naphthalidin-4-yl group, 1H-pyrrolo[3,2-
c]pyridin-6-yl group, 1H-pyrrolo[3,2-c]pyridin-4-yl group, 1H-pyrrolo[2,3-c]pyridin-
5-yl group, 1H-pyrrolo[2,3-c]pyridin-4-yl group, 1H-pyrazolo[4,3-b]pyridin-5-yl
group, 1H-pyrazolo[4,3-b]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-6-yl group,
1H-pyrazolo[4,3-c]pyridin-4-yl group, 1H-pyrazolo[3,4-c]pyridin-5-yl group, 1H-
pyrazolo[3,4-c]pyridin-4-yl group, 1H-pyrazolo[3,4-b]pyridin-5-yl group, 1H-
pyrazolo[3,4-b]pyridin-4-yl group, [1,2,4]triazol[4,3-a]pyridin-6-yl group,
[1,2,4]triazol[4,3-a]pyridin-7-yl group, thieno[3,2-c]pyridin-2-yl group, thieno[3,2-
c]pyridin-3-yl group, thieno[3,2-c]pyridin-6-yl group, thieno[3,2-b]pyridin-2-yl group,
thieno[3,2-b]pyridin-3-yl group, thieno[3,2-b]pyridin-5-yl group, thieno[3,2-
b]pyridin-6-yl group, 1H-thieno[3,2-c]pyrazol-5-yl group, 1H-thieno[3,2-c]pyrazol-4-
yl group, benzo[d]isoxazol-5-yl group, benzo[d]isoxazol-4-yl group, benzo[d]isoxazol-
6-yl group, benzo[d]isoxazol-7-yl group, benzo[c]isoxazol-5-yl group,
benzo[c]isoxazol-4-yl group, benzo[c]isoxazol-6-yl group, benzo[c]isoxazol-7-yl group,
indolizin-7-yl group, indolizin-6-yl group, indolizine-8-yl group, 1,3-dihydroindol-5-
yl group, 1,3-dihydroindol-4-yl group, 1,3-dihydroindol-6-yl group, 1H-pyrazolo[3,4-
d]thiazol-5-yl group, 2H-isoindol-5-yl group, 2H-isoindol-4-yl group,
[1,2,4]triazol[1,5-a]pyrimidin-6-yl group, 1H-pyrazolo[3,4-b]pyrazin-5-yl group,
1H-imidazo[4,5-b]pyrazin-5-yl group, 7H-purin-2-yl group, 4H-chromen-6-yl group,

or 4H-chromen-5-yl group (the aforementioned groups may be substituted with one of X_a or two or more of the same or different X_a), and X_a is oxo group, thioxo group, fluorine atom, chlorine atom, trifluoromethyl group, methyl group, ethyl group, propyl group, 2-hydroxyethyl group, carboxymethyl group, 2-carboxyethyl group, N,N-dimethylcarbamoylmethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, carboxymethoxy group, 2-carboxyethoxy group, N,N-dimethylcarbamoylmethoxy group, amino group, methylamino group, dimethylamino group, 2-hydroxyethylamino group, carbamoylaminogroup, acetylamino group, furan-2-carboxyamino group, 2-hydroxyacetylaminogroup, 2-aminoacetylaminogroup, methylsulfonylaminogroup, (N,N-dimethylsulfamoyl)aminogroup, methanesulfonyl group, sulfamoyl group, N-methylsulfamoyl group, N,N-dimethylsulfamoyl group, carboxyl group, acetyl group, carbamoyl group, or N,N-dimethylcarbamoyl group, provided that when AR' contains hydroxyl group, the hydroxyl group may be protected with R^{p1}, and when AR' contains amino group, the amino group may be protected with R^{p2}.

(141) The compound according to (139) or (140) mentioned above, wherein, in the formula (III), R_{s'} is -O-R_{x'}, and all of C^{2'}, C^{3'}, C^{4'}, C^{5'} and C^{6'} in the aromatic ring (E') are not replaced with V.

(142) The compound according to (131) mentioned above, wherein, in the formula (III), AR' binds at the position of C^{2'} in the aromatic ring (E'), R_{s'} binds to one of the ring-constituting carbon atoms C^{3'}, C^{4'}, and C^{5'}, R_{s'} is -O-R_{x'}, and all of C^{2'}, C^{3'}, C^{4'}, C^{5'} and C^{6'} in the aromatic ring (E') are not replaced with V.

(143) The compound according to (132) mentioned above, wherein, in the formula (III), AR' binds at the position of C^{2'} in the aromatic ring (E'), R_{s'} binds to one of the ring-constituting carbon atoms C^{3'}, C^{4'}, and C^{5'}, R_{s'} is -O-R_{x'}, and all of C^{2'}, C^{3'}, C^{4'}, C^{5'} and C^{6'} in the aromatic ring (E') are not replaced with V.

(144) The compound according to any one of (139) to (143) mentioned above,

wherein, in the formula (III), Rs' binds to C^3' .

(145) The compound according to (129) mentioned above, wherein, in the formula (III), C^2' is carbon atom to which AR' binds, C^3' is carbon atom to which Rs' binds, C^4' may be replaced with V' , C^5' and C^6' are unsubstituted ring-constituting carbon atoms,

V' is nitrogen atom, or carbon atom substituted with Zx' , Zx' is fluorine atom, methyl group, hydroxyl group, amino group, N -methylamino group, or N,N -dimethylamino group, provided that when Zx' contains hydroxyl group, the hydroxyl group may be protected with Rp^1 , and when Zx' contains amino group, the amino group may be protected with Rp^2 ,

Rs' is $\cdot\text{O}-\text{Rx}'$, Rx' is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-

chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxyethyl group, 2-(3-chlorophenoxyethyl group, 2-(4-chlorophenoxyethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, or 2-(N-ethyl-N-phenylamino)ethyl group, and

AR' is naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzof[b]furan-5-yl group, 2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-

indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group, 1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group, 2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group, 2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group, 2-oxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group, quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzoldisothiazol-5-yl group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group, 1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group, 1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group, 3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group, imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, 1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, or benzoxazol-5-yl group (the aforementioned groups may be substituted with one of Xa or two or more of the same or different Xa), provided that when AR' contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when AR' contains amino group, the amino group may be protected with Rp².

(146) The compound according to (139) to (143) mentioned above, wherein, in the formula (III), R_{s'} binds to C^{4'}.

(147) The compound according to (129) mentioned above, wherein, in the formula (III), C^{2''} is carbon atom to which AR' binds, C^{4''} is carbon atom to which R_{s'} binds, C^{5''} may be replaced with V', C^{3''} and C^{6''} are unsubstituted ring-constituting carbon atoms,

V' is nitrogen atom, or carbon atom substituted with Zx', Zx' is fluorine atom, methyl group, hydroxyl group, amino group, N-methylamino group, or N,N-dimethylamino group, provided that when Zx' contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when Zx' contains amino group, the amino group may be protected with Rp²,

R_{s'} is -O-Rx', Rx' is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl

group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group, 2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, or 2-(N-ethyl-N-phenylamino)ethyl group, and

AR' is naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group, 2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-

methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group, 1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group, 2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group, 2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group, 2-oxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group, quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzod[isothiazol-5-yl group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group, 1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group, 1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group, 3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group, imidazo[1,2-alpyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, 1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, or benzoxazol-5-yl group, provided that when AR' contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when AR' contains amino group, the amino group may be protected with Rp².

- (148) The compound according to any one of (139) to (143) mentioned above, wherein, in the formula (III), Rs' binds to C^{5'}.
- (149) The compound according to (129) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to the atom C^{5'} or C^{6'} in the aromatic ring (E').
- (150) The compound according to (149) mentioned above, wherein, in the formula (III), Rs' is -O-Rx', and all of C^{2'}, C^{3'}, C^{4'}, C^{5'} and C^{6'} in the aromatic ring (E') are not replaced with V.
- (151) The compound according to (131) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to the atom C^{5'} or C^{6'} in the aromatic ring (E'), Rs' is -O-Rx', and all of C^{2'}, C^{3'}, C^{4'}, C^{5'} and C^{6'} in the aromatic ring (E') are not replaced with V.
- (152) The compound according to (132) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to the atom C^{5'} or C^{6'} in the aromatic ring (E'), Rs' is -O-Rx', and all of C^{2'}, C^{3'}, C^{4'}, C^{5'} and C^{6'} in the aromatic ring (E') are not replaced with V.
- (153) The compound according to any one of (149) to (152) mentioned above, wherein, in the formula (III), Rs' binds to C^{5'}.
- (154) The compound according to (129) mentioned above, wherein, in the formula (III), C^{3'} is carbon atom to which AR' binds, C^{5'} is carbon atom to which Rs' binds, C^{2'}, C^{4'}, and C^{6'} are unsubstituted ring-constituting carbon atoms,
- Rs' is -O-Rx', Rx' is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group,

5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxyethyl group, 2-(3-

chlorophenoxy)ethyl group, 2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, or 2-(N-ethyl-N-phenylamino)ethyl group, and .

AR' is naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group, 2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, benzof[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group, 1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group, 2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group, 2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group, quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group, 1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-

5-yl group, 1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group, 3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group, imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, 1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, or benzoxazol-5-yl group, provided that when AR' contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when AR' contains amino group, the amino group may be protected with Rp².

(155) The compound according to any one of (149) to (152) mentioned above, wherein, in the formula (III), Rs' binds to C^{6'}.

(156) The compound according to (129) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), and C^{5'} is V'.

(157) The compound according to (131) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{6'} is carbon atom substituted with Zx, C^{2'} and C^{5'} are unsubstituted carbon atoms, and Rs' is -O-Rx'.

(158) The compound according to (132) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{6'} is carbon atom substituted with Zx, C^{2'} and C^{5'} are unsubstituted ring-constituting carbon atoms, and Rs' is -O-Rx'.

(159) The compound according to (129) mentioned above, wherein, in the formula (III), C^{3'} is carbon atom to which AR' binds, C^{4'} is a carbon atom to which Rs' binds, C^{6'} is carbon atom substituted with Zx', C^{2'} and C^{5'} are unsubstituted ring-constituting carbon atoms,

Zx' is fluorine atom, methyl group, hydroxyl group, amino group, N-methylamino group, or N,N-dimethylamino group, provided that when Zx' contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when Zx' contains amino group, the amino group may be protected with Rp²,

Rs' is -O-Rx', Rx' is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-

(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group, 2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, or 2-(N-ethyl-N-phenylamino)ethyl group, and

AR' is naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group, 2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-

indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group, 1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group, 2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group, 2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group, 2-oxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group, quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group, 1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group, 1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group, 3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group, imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, 1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, or benzoxazol-5-yl group, provided that when Ar' contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when AR' contains amino group, the amino group may be protected with Rp².

(160) The compound according to (129) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is nitrogen atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, and Rs' is -O-Rx'.

(161) The compound according to (131) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is nitrogen atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon

atoms, and Rs' is ·O·Rx'.

(162) The compound according to (132) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is nitrogen atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, and Rs' is ·O·Rx'.

(163) The compound according to (129) mentioned above, wherein, in the formula (III), C^{3'} is carbon atom to which AR' binds, C^{4'} is carbon atom to which Rs' binds, C^{5'} is nitrogen atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms,

Rs' is ·O·Rx', Rx' is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-

difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group, 2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, or 2-(N-ethyl-N-phenylamino)ethyl group, and

AR' is naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group, 2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-

5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group, 1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group, 2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group, 2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group, 2-oxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group, quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group, 1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group, 1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group, 3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group, imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, 1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, or benzoxazol-5-yl group, provided that when AR' contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when AR' contains amino group, the amino group may be protected with Rp².

(164) The compound according to (129) mentioned above, wherein, in the formula (III), AR' binds to C⁹ in the aromatic ring (E'), Rs' binds to C⁴ in the aromatic ring (E'), C⁹ is a ring-constituting carbon atom substituted with Zx', or an unsubstituted

- ring-constituting carbon atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, Rs' is ·D·Rx', D is a single bind, sulfur atom, ·S(O)·, ·S(O)₂·, or ·C(O)·.
- (165) The compound according to (131) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is a ring-constituting carbon atom substituted with Zx', or an unsubstituted ring-constituting carbon atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, Rs' is ·D·Rx', and D is a single bind, sulfur atom, ·S(O)·, ·S(O)₂·, or ·C(O)·.
- (166) The compound according to (132) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is a ring-constituting carbon atom substituted with Zx', or an unsubstituted ring-constituting carbon atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, Rs' is ·D·Rx', and D is a single bind, sulfur atom, ·S(O)·, ·S(O)₂·, or ·C(O)·.
- (167) The compound according to (129) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is a ring-constituting carbon atom substituted with Zx', or an unsubstituted ring-constituting carbon atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, and Rs' is ·N(Ry')(Rz').
- (168) The compound according to (131) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is a ring-constituting carbon atom substituted with Zx', or an unsubstituted ring-constituting carbon atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, and Rs' is ·N(Ry')(Rz').
- (169) The compound according to (132) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is a ring-constituting carbon atom substituted with Zx', or an unsubstituted

ring-constituting carbon atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, and Rs' is ·N(Ry')(Rz').

(170) The compound according to (129) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is carbon atom substituted with ·N(Rn¹)(Rn²) (provided that one of Rn¹ and Rn² is a substituent other than hydrogen atom), C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, and Rs' is ·O·Rx'.

(171) The compound according to (131) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is carbon atom substituted with ·N(Rn¹)(Rn²) (provided that one of Rn¹ and Rn² is a substituent other than hydrogen atom), C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, and Rs' is ·O·Rx'.

(172) The compound according to (123) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is carbon atom substituted with ·N(Rn¹)(Rn²) (provided that one of Rn¹ and Rn² is a substituent other than hydrogen atom), C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, and Rs' is ·O·Rx'.

(173) The compound according to (129) mentioned above, wherein, in the formula (III), C^{3'} is carbon atom to which AR' binds, C^{4'} is carbon atom to which Rs' binds, C^{5'} is carbon atom substituted with Zx', C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms,

Zx' is N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino group, N,N-dimethylamino group, N,N-diethylamino group, formylamino group, acetyl amino group, carbamoyl amino group, mesylamino group, or N,N-dimethylsulfamoyl amino group, provided that when Zx' contains amino group, the amino group may be protected with Rp²,

Rs' is ·O·Rx', Rx' is butyl group, isobutyl group, 2-ethylbutyl group,

cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl

group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxyethyl group, 2-(3-chlorophenoxyethyl group, 2-(4-chlorophenoxyethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, or 2-(N-ethyl-N-phenylamino)ethyl group, and

AR' is naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group, 2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group, 1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group, 2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group, 2-aminobenzothiazol-6-yl group, 2-oxo-2,3-

dihydrobenzothiazol-6-yl group, 2-oxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group, quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group, 1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group, 1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group, 3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group, imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, 1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, or benzoxazol-5-yl group, provided that when AR' contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when AR' contains amino group, the amino group may be protected with Rp².

- (174) The compound according to (129) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is a ring-constituting carbon atom substituted with Zx', or an unsubstituted ring-constituting carbon atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, Rs' is -D-Rx', and Rx' has the same meaning as Rc, provided that when Rc contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when Rc contains amino group, the amino group may be protected with Rp².
- (175) The compound according to (131) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is a ring-constituting carbon atom substituted with Zx', or an unsubstituted ring-constituting carbon atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, Rs' is -D-Rx', and Rx' has the same meaning as Rc, provided that

when Rc contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when Rc contains amino group, the amino group may be protected with Rp².

(176) The compound according to (132) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is a ring-constituting carbon atom substituted with Zx', or an unsubstituted ring-constituting carbon atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, Rs' is ·D·Rx', and Rx' has the same meaning as Rc, provided that when Rc contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when Rc contains amino group, the amino group may be protected with Rp².

(177) The compound according to (129) mentioned above, wherein, in the formula (III), C^{3'} is carbon atom to which AR' binds, C^{4'} is a carbon atom to which Rs' binds, C^{5'} is a ring-constituting carbon atom substituted with Zx', or an unsubstituted ring-constituting carbon atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms,

Zx' is fluorine atom, methyl group, hydroxyl group, amino group, N-methylamino group, or N,N-dimethylamino group, provided that when Zx' contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when Zx' contains amino group, the amino group may be protected with Rp²,

Rs' is ·O·Rx', Rx' has the same meaning as Rc, provided that when Rc contains hydroxyl group, the hydroxyl group may be protected with Rp¹, p in Rc is an integer of 2, A⁴ is a single bind or methylene, A⁵ is ·C(O)·, ·C(S)·, or ·S(O)₂·, Rd is methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, or 4-fluorophenylmethyl group, Re is isopropyl group, butyl group, isobutyl group, t-butyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, cyclopentylmethyl group, cyclohexylmethyl group, phenyl group,

4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, propyloxy group, isopropoxy group, butyloxy group, isobutyloxy group, t-butyloxy group, cyclopropoxy group, cyclopentyloxy group, cyclohexyloxy group, cyclopentylmethoxy group, cyclohexylmethoxy group, phenoxy group, 4-methylphenoxy group, 4-chlorophenoxy group, 4-fluorophenoxy group, N-propylamino group, N-isopropylamino group, N-butylamino group, N-isobutylamino group, N-t-butylamino group, N-cyclopropylamino group, N-cyclopentylamino group, N-cyclohexylamino group, N-phenylamino group, N-(4-methylphenyl)amino group, N-(4-chlorophenyl)amino group, N-(4-fluorophenyl)amino group, pyrrolidino group, piperidino group, or morpholino group, and

AR' is naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzofuran-5-yl group, 2-methylbenzofuran-5-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group, 1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1-(2-hydroxyethyl)-1H-

indol-5-yl group, benzothiazol-6-yl group, 2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group, 2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group, 2-oxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group, quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group, 1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group, 1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group, 3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group, imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, 1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, or benzoxazol-5-yl group, provided that when AR' contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when AR' contains amino group, the amino group may be protected with Rp².

(178) The compound according to (129) mentioned above, wherein, in the formula (III), AR' binds to C^{3'}, Rs' binds to any one of the atoms C^{4'}, C^{5'}, and C^{6'}, a ring constituting carbon atom to which Rs' does not bind among C^{4'}, C^{5'}, and C^{6'} may be replaced with V',

V' is nitrogen atom, or carbon atom substituted with Zx', Zx' is fluorine atom, chlorine atom, bromine atom, nitro group, methyl group, hydroxyl group, methoxy group, amino group, N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino group, N,N-dimethylamino group, N,N-diethylamino group, formylamino group, acetylamino group, carbamoylamino group, mesylamino group, or N,N-dimethylsulfamoylamino group, provided that when Zx'

contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when Zx' contains amino group, the amino group may be protected with Rp²,

Rs' is -D-Rx' or -N(Ry')(Rz'), D is oxygen atom or sulfur atom, Rx' is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-cyclopentylethyl group, or 2-cyclohexylethyl group, or Rb or Rc, Q in Rb is phenyl group, thieryl group, furyl group, pyridyl group, oxazolyl group, naphthyl group, tetrahydronaphthyl group, indanyl group, indolyl group, or dihydrobenzodioxyl group, A² is a single bind, oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)- (provided that when A² is oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)-, A¹ is ethylene), R² and R³ independently represent hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, dimethylamino group, acetylamino group, or methylsulfonylamino group (provided that when Q is phenyl group, A¹ is a single bind or unsubstituted methylene, and A² is a single bind, one of R² and R³ is a substituent other than hydrogen atom), p in Rc is an integer of 2 or 3, A⁴ is a single bind or methylene, A⁵ is -C(O)-, -C(S)-, or -S(O)₂-, Rd is hydrogen atom, or methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, cyclopropyl group, cyclopropylmethyl group, cyclopentyl group, cyclopentylmethyl group, cyclohexyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, or pyridin-4-yl group, Re is methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, cyclopentylmethyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, phenylmethyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-

3-yl group, pyridin-4-yl group, furan-2-yl group, furan-3-yl group, thiophen-2-yl group, thiophen-3-yl group, methoxy group, ethoxy group, propyloxy group, isopropyloxy group, butyloxy group, isobutyloxy group, t-butyloxy group, cyclopropyloxy group, cyclopentyloxy group, cyclohexyloxy group, cyclopentylmethoxy group, cyclohexylmethoxy group, phenoxy group, 4-methylphenoxy group, 4-chlorophenoxy group, 4-fluorophenoxy group, thiomethoxy group, amino group, N-methylamino group, N,N-dimethylamino group, N-ethylamino group, N,N-diethylamino group, N-propylamino group, N-isopropylamino group, N-butylamino group, N-isobutylamino group, N-t-butylamino group, N-cyclopropylamino group, N-cyclopentylamino group, N-cyclohexylamino group, N-phenylamino group, N-(4-methylphenyl)amino group, N-(4-chlorophenyl)amino group, N-(4-fluorophenyl)amino group, N-(pyridin-2-yl)amino group, N-(pyridin-3-yl)amino group, N-(furan-2-yl)amino group, N-(furan-3-yl)amino group, N-(thiophen-2-yl)amino group, N-(thiophen-3-yl)amino group, pyrrolidino group, piperidino group, morpholino group, methyloxycarbonylamino group or ethyloxycarbonylamino group, Rz' is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl

group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxyethyl group, 2-(3-chlorophenoxyethyl group, 2-(4-chlorophenoxyethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group, 2-(N-ethyl-N-phenylamino)ethyl group, isobutryl group, isopropylthiocarbonyl group, isopropylsulfonyl group, valeryl group, butylthiocarbonyl group, isovaleryl group, isobutylthiocarbonyl group, pivaloyl group, t-butylthiocarbonyl group, cyclopropylcarbonyl group, cyclopropylthiocarbonyl group, cyclopentylcarbonyl group, cyclopentylthiocarbonyl

group, cyclohexylcarbonyl group, cyclohexylthiocarbonyl group, cyclopentylmethylcarbonyl group, cyclopentylmethylthiocarbonyl group, cyclohexylmethylcarbonyl group, cyclohexylmethylthiocarbonyl group, benzoyl group, thiobenzoyl group, phenylsulfonyl group, 4-methylphenylcarbonyl group, 4-methylphenylthiocarbonyl group, 4-methylphenylsulfonyl group, 4-chlorophenylcarbonyl group, 4-chlorophenylthiocarbonyl group, 4-fluorophenylcarbonyl group, 4-fluorophenylthiocarbonyl group, isopropoxy carbonyl group, N-isopropylcarbamoyl group, N-isopropylthiocarbamoyl group, butyloxycarbonyl group, N-butyloxycarbonyl group, N-butyloxycarbonyl group, isobutyloxycarbonyl group, N-isobutyloxycarbonyl group, N-isobutylthiocarbamoyl group, t-butyloxycarbonyl group, N-t-butyloxycarbonyl group, N-t-butyloxycarbonyl group, N-t-butyloxycarbonyl group, cyclopropylcarbonyl group, N-cyclopropylcarbonyl group, cyclopentyloxycarbonyl group, N-cyclopentyloxycarbonyl group, N-cyclopentylthiocarbamoyl group, cyclohexyloxycarbonyl group, N-cyclohexylcarbonyl group, N-cyclohexylthiocarbamoyl group, cyclopentylmethyloxycarbonyl group, cyclohexylmethyloxycarbonyl group, phenyloxycarbonyl group, N-phenylcarbamoyl group, N-phenylthiocarbamoyl group, 4-methylphenyloxycarbonyl group, N-(4-methylphenyl)carbamoyl group, N-(4-methylphenyl)thiocarbamoyl group, 4-chlorophenyloxycarbonyl group, N-(4-chlorophenyl)thiocarbamoyl group, 4-fluorophenyloxycarbonyl group, N-(4-fluorophenyl)carbamoyl group, N-(4-fluorophenyl)thiocarbamoyl group, (pyrrolidino-1-yl)carbonyl group, (piperidino-1-yl)carbonyl group, or (morpholino-4-yl)carbonyl group, Ry' is hydrogen atom, methyl group, ethyl group or isobutyl group, or binds to Rz' to form pyrrolidino group, piperidino group, piperazine group, morpholino group, pyrrol-1-yl group, imidazol-1-yl group, or pyrazol-1-yl group together with the nitrogen atom, provided that

when -D-Rx' or -N(Ry')(Rz') contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when the substituent -D-Rx' or -N(Ry')(Rz') contains amino group, the amino group may be protected with Rp²,

AR' is naphthalen-2-yl group, naphthalen-1-yl group, benzofuran-5-yl group, benzofuran-4-yl group, benzofuran-2-yl group, benzo[b]thiophen-5-yl group, benzo[b]thiophen-4-yl group, benzo[b]thiophen-2-yl group, indol-5-yl group, indol-4-yl group, indol-6-yl group, benzothiazol-6-yl group, benzothiazol-7-yl group, benzothiazol-5-yl group, benzothiazol-4-yl group, dihydro-3H-benzothiazol-6-yl group, dihydro-3H-benzothiazol-7-yl group, dihydro-3H-benzothiazol-5-yl group, dihydro-3H-benzothiazol-4-yl group, quinolin-6-yl group, quinolin-3-yl group, quinolin-5-yl group, quinolin-7-yl group, dihydro-1H-quinolin-6-yl group, dihydro-1H-quinolin-5-yl group, benzo[d]isothiazol-5-yl group, benzo[d]isothiazol-4-yl group, benzo[d]isothiazol-6-yl group, benzo[d]isothiazol-7-yl group, 1H-indazol-5-yl group, 1H-indazol-4-yl group, 1H-indazol-6-yl group, benzo[c]isothiazol-5-yl group, benzo[c]isothiazol-4-yl group, benzo[c]isothiazol-6-yl group, benzo[c]isothiazol-7-yl group, 2H-indazol-5-yl group, 2H-indazol-4-yl group, 2H-indazol-6-yl group, imidazo[1,2-a]pyridin-6-yl group, imidazo[1,2-a]pyridin-7-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1H-pyrrolo[2,3-b]pyridin-4-yl group, isoquinolin-6-yl group, isoquinolin-3-yl group, isoquinolin-5-yl group, isoquinolin-7-yl group, dihydro-2H-isoquinolin-6-yl group, dihydro-2H-isoquinolin-5-yl group, cinnolin-6-yl group, cinnolin-5-yl group, quinazolin-6-yl group, quinazolin-7-yl group, quinazolin-5-yl group, quinoxalin-2-yl group, quinoxalin-6-yl group, quinoxalin-5-yl group, 1H-benzimidazol-5-yl group, 1H-benzimidazol-4-yl group, benzoxazol-5-yl group, benzoxazol-6-yl group, benzoxazol-4-yl group, benzoxazol-7-yl group, 1H-pyrrolo[3,2-b]pyridin-5-yl group, 1H-pyrrolo[3,2-b]pyridin-6-yl group, benzo[1,2,5]thiadiazol-5-yl group, benzo[1,2,5]thiadiazol-4-yl group, 1H-benzotriazol-5-yl group, 1H-benzotriazol-4-yl group, 1,3-dihydro-1H-pyrrolo[2,3-

b]pyridin-5-yl group, 1,3-dihydropyrrolo[2,3-b]pyridin-4-yl group, 1,3-dihydrobenzimidazol-5-yl group, 1,3-dihydrobenzimidazol-4-yl group, dihydro-3H-benzoxazol-6-yl group, dihydro-3H-benzoxazol-7-yl group, dihydro-3H-benzoxazol-5-yl group, dihydro-3H-benzoxazol-4-yl group, phthalazin-6-yl group, phthalazin-5-yl group, [1,8]naphthalidin-3-yl group, [1,8]naphthalidin-4-yl group, [1,5]naphthalidin-3-yl group, [1,5]naphthalidin-4-yl group, 1H-pyrrolo[3,2-c]pyridin-6-yl group, 1H-pyrrolo[3,2-c]pyridin-4-yl group, 1H-pyrrolo[2,3-c]pyridin-5-yl group, 1H-pyrrolo[2,3-c]pyridin-4-yl group, 1H-pyrazolo[4,3-b]pyridin-5-yl group, 1H-pyrazolo[4,3-b]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-4-yl group, 1H-pyrazolo[3,4-c]pyridin-5-yl group, 1H-pyrazolo[3,4-c]pyridin-4-yl group, 1H-pyrazolo[3,4-b]pyridin-5-yl group, 1H-pyrazolo[3,4-b]pyridin-4-yl group, [1,2,4]triazolo[4,3-a]pyridin-6-yl group, [1,2,4]triazolo[4,3-a]pyridin-7-yl group, thieno[3,2-c]pyridin-2-yl group, thieno[3,2-c]pyridin-3-yl group, thieno[3,2-c]pyridin-6-yl group, thieno[3,2-b]pyridin-2-yl group, thieno[3,2-b]pyridin-3-yl group, thieno[3,2-b]pyridin-5-yl group, thieno[3,2-b]pyridin-6-yl group, 1H-thieno[3,2-c]pyrazol-5-yl group, 1H-thieno[3,2-c]pyrazol-4-yl group, benzo[d]isoxazol-5-yl group, benzo[d]isoxazol-4-yl group, benzo[d]isoxazol-6-yl group, benzo[d]isoxazol-7-yl group, benzo[c]isoxazol-4-yl group, benzo[c]isoxazol-6-yl group, benzo[c]isoxazol-7-yl group, indolizin-7-yl group, indolizin-6-yl group, indolizine-8-yl group, 1,3-dihydroindol-5-yl group, 1,3-dihydroindol-4-yl group, 1,3-dihydroindol-6-yl group, 1H-pyrazolo[3,4-d]thiazol-5-yl group, 2H-isoindol-5-yl group, 2H-isoindol-4-yl group, [1,2,4]triazolo[1,5-a]pyrimidin-6-yl group, 1H-pyrazolo[3,4-b]pyrazin-5-yl group, 1H-imidazo[4,5-b]pyrazin-5-yl group, 7H-purin-2-yl group, 4H-chromen-6-yl group, or 4H-chromen-5-yl group (the aforementioned groups may be substituted with one of Xa or two or more of the same or different Xa), and Xa is oxo group, thioxo group, fluorine atom, chlorine atom, trifluoromethyl group, methyl group, ethyl group,

propyl group, 2-hydroxyethyl group, carboxymethyl group, 2-carboxyethyl group, N,N-dimethylcarbamoylmethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, carboxymethoxy group, 2-carboxyethoxy group, N,N-dimethylcarbamoylmethoxy group, amino group, methylamino group, dimethylamino group, 2-hydroxyethylamino group, carbamoylamino group, acetylamino group, furan-2-carboxyamino group, 2-hydroxyacetylamino group, 2-aminoacetylamino group, methylsulfonylamino group, (N,N-dimethylsulfamoyl)amino group, methanesulfonyl group, sulfamoyl group, N-methylsulfamoyl group, N,N-dimethylsulfamoyl group, carboxyl group, acetyl group, carbamoyl group, or N,N-dimethylcarbamoyl group, provided that when AR' contains hydroxyl group, the hydroxyl group may be protected with Rp¹, and when AR' contains amino group, the amino group may be protected with Rp².

(179) The compound according to (119) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is a ring-constituting carbon atom substituted with Zx', or an unsubstituted ring-constituting carbon atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, and Rs' is -O-Rx'.

(180) The compound according to (131) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is a ring-constituting carbon atom substituted with Zx, or an unsubstituted ring-constituting carbon atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, and D is oxygen atom.

(181) The compound according to (132) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is a ring-constituting carbon atom substituted with Zx', or an unsubstituted ring-constituting carbon atom, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, and Rs' is -O-Rx'.

- (182) The compound according to (129) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is carbon atom substituted with nitro group, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, and Rs' is -O-Rx'.
- (183) The compound according to (131) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is carbon atom substituted with nitro group, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, and Rs' is -O-Rx'.
- (184) The compound according to (132) mentioned above, wherein, in the formula (III), AR' binds to C^{3'} in the aromatic ring (E'), Rs' binds to C^{4'} in the aromatic ring (E'), C^{5'} is carbon atom substituted with nitro group, C^{2'} and C^{6'} are unsubstituted ring-constituting carbon atoms, and Rs' is -O-Rx'.
- (185) An agent for prophylactic and/or therapeutic treatment of fibrosis, which contains a type 4 PLA₂ inhibitor as an active ingredient.
- (186) An agent for prophylactic and/or therapeutic treatment of pulmonary fibrosis, which contains a type 4 PLA₂ inhibitor as an active ingredient..
- (187) The prophylactic and/or therapeutic agent according to (186), wherein the pulmonary fibrosis is drug-induced pulmonary fibrosis.
- (188) The prophylactic and/or therapeutic agent according to (187), wherein the drug-induced pulmonary fibrosis is a disease induced by one or more kinds of medicaments among methotrexate, sodium aurothiomalate, auranofin, D-penicillamine, bucillamine, actarit, salazosulfapyridine, cyclophosphamide, Taxol, etoposide, cisplatin, vincristine, vinblastine, irinotecan, gefitinib, and bleomycin.
- (189) The prophylactic and/or therapeutic agent according to (187), wherein the drug-induced pulmonary fibrosis is a disease induced by one or more kinds of medicaments among methotrexate and bleomycin.
- (190) The prophylactic and/or therapeutic agent according to (186), wherein the

type 4 PLA₂ inhibitor is a compound represented by the formula (I) or a pharmacologically acceptable salt thereof.

(191) The prophylactic and/or therapeutic agent according to (186), wherein the type 4 PLA₂ inhibitor is an inhibitor selected from the group consisting of 4-(1-benzhydryl-6-chloro-1H-indol-3-ylmethyl)-3-methoxybenzoic acid, 4-[4-[2-[bis(4-chlorophenyl)methoxylethylsulfonyl]ethoxyphenyl]-1,1,1-trifluoro-2-butane], N-{1-[2-(2,4-difluorobenzoyl)benzoyl]-4-tritylsulfanylpyrrolidin-2-ylmethyl}-4-(2,4-dioxothiazolidin-5-ylidenemethyl)benzoic acid amide, 4-methyl-2-oxo-5-(5,6,7,8-tetrahydronaphthalen-2-yl)oxazolidine-3-carboxylic acid (6-methoxytetrahydropyran-2-yl)amide, 4-methyl-2-oxo-5-(4-methylphenyl)thiazolidine-3-carboxylic acid (tetrahydropyran-2-yl)amide, 4-[3-(4-decyloxyphenoxy)-2-oxopropoxy]benzoic acid, and 1-[2-[4-(carboxymethyl)phenoxyethyl]-3-dodecanoylindole-2-carboxylic acid.

The compound (I) of the present invention or a pharmaceutically acceptable salt thereof has an action of suppressing the production of both of prostaglandins and leukotrienes, and said compound has characteristic features that, when administered to a human or animal, the compound exerts superior prophylactic and/or therapeutic effect on diseases or pathological conditions in which a prostaglandin and/or leukotriene is involved, and the compound has extremely low toxicity. The compounds (II) and (III) of the present invention are synthetic intermediates useful for the production of the compound (I) of the present invention. Furthermore, it was confirmed that a type 4 PLA₂ inhibitor is useful as a prophylactic and/or therapeutic agent for fibrosis, in particular, pulmonary fibrosis, especially drug-induced pulmonary fibrosis, which was induced as a side effect of a medicament.

Best Mode for Carrying out the Invention

In the present specification, carbon atom may sometimes be represented simply by "C", hydrogen atom by "H", oxygen atom by "O", sulfur atom by "S", and nitrogen atom by "N".

Examples of Link in the aforementioned general formula (I) include a saturated straight hydrocarbon chain having 1 to 3 carbon atoms or an unsaturated straight hydrocarbon chain having 2 or 3 carbon atoms. In the present invention, the straight chain of the saturated straight hydrocarbon chain is preferably unsubstituted. The straight chain of the unsaturated straight hydrocarbon chain is also preferably unsubstituted. As the saturated straight hydrocarbon chain, -(CH₂)_n- is preferred. Symbol n is an integer of 1 to 3. When n is 1, 2 or 3, the desired action is most characteristically exhibited. Methylene where n is 1, ethylene where n is 2 and trimethylene where n is 3 are preferred, and ethylene where n is 2 is particularly preferred.

The unsaturated hydrocarbon chain having 2 or 3 carbon atoms means a hydrocarbon chain which contains an unsaturated bond as a double bond or a triple bond among the carbon-carbon bonds. As the unsaturated hydrocarbon chain, an unsaturated hydrocarbon chain containing a double bond is preferred. When the chain contains one or more double bonds, the number of the double bond may preferably one. Specific examples include ethenylene which has two carbon atoms and contains one double bond, as well as ethynylene which has two carbon atoms and contains one triple bond, propen-3-yl which has three carbon atoms and contains one double bond, and propyn-3-yl which has three carbon atoms and contains one triple bond.

C², C³, C⁴, C⁵ and C⁶ in the aromatic ring (E) in the formula (I) each represent a ring-constituting carbon atom. The ring-constituting carbon atoms form the aromatic ring (E), and accordingly, they are represented as C or CH.

Among them, any one of ring-constituting carbon atoms to which Rs or Ar does not bind may be replaced with V. The aforementioned expression "to be replaced with" means that any one of the ring-constituting carbon atoms C², C³, C⁴, C⁵ and C⁶ is replaced with V, and thus V may sometimes be a ring-constituting component. Rs and AR each bind to any of the ring-constituting carbon atoms C², C³, C⁴, C⁵ or C⁶ in the aromatic ring (E), and this means that, for example, when AR binds to C², Rs binds to any of the ring-constituting carbon atoms C³, C⁴, C⁵ and C⁶, when AR binds to C³, Rs binds to any of the ring-constituting carbon atoms C², C⁴, C⁵ and C⁶, and when AR binds to C⁴, Rs binds to the ring-constituting carbon atom C² or C³.

Preferred examples of these combinations of substitution positions include a compound wherein AR binds to C², and Rs binds to any of the atoms C³, C⁴, and C⁵, and particularly preferred examples include a compound wherein AR binds to C², and Rs binds to C³ or C⁴. Preferred examples also include a compound wherein AR binds to C³, and Rs binds to any of the atoms C⁴, C⁵, and C⁶, and particularly preferred examples also include a compound wherein AR binds to C³, and Rs binds to the atom C⁴ or C⁵. A still more preferred example is a compound wherein AR binds to C³, and Rs binds to C⁴.

replaced with V; a compound wherein AR binds to C³, Rs binds to C⁵, and C⁴ is replaced with V; a compound wherein AR binds to C³, Rs binds to C⁶, and C⁵ is replaced with V, and the like. Furthermore, particularly preferred examples include a compound wherein AR binds to C³, Rs binds to C⁴, and C⁵ is replaced with V; and a compound wherein AR binds to C³, Rs binds to C⁴, and C⁶ is replaced with V, and an particularly preferred example is a compound wherein AR binds to C³, Rs binds to C⁴, and C⁵ is replaced with V.

V represents nitrogen atom, or carbon atom substituted with Zx. Namely, when V represent nitrogen atom, the aromatic ring (E) in the formula (I) represents a pyridine ring. When V represent carbon atom substituted with Zx, the aromatic ring (E) is a benzene ring having Zx. Both of the compounds are particularly preferred. Furthermore, a compound wherein AR binds to C³, Rs binds to C⁴, C⁵ is replaced with V, and this V represents nitrogen atom is particularly preferred.

Zx is defined as a linear or branched saturated alkyl group having 1 to 4 carbon atoms, fluorine atom, chlorine atom, bromine atom, nitro group, -OR⁹, or -N(Rn¹)(Rn²). Among them, fluorine atom, chlorine atom, bromine atom, and nitro group are preferred examples, and fluorine atom is particularly preferred.

As for Zx, examples of the linear or branched saturated alkyl group having 1 to 4 carbon atoms include methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group and the like, and among them, methyl group is particularly preferred.

R⁹ represents hydrogen atom, a lower alkyl group having 1 to 4 carbon atoms, or -A⁶-Qp. Among them, hydrogen atom is a particularly preferred example. Preferred examples of the lower alkyl group having 1 to 4 carbon atoms include methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, and the like, and methyl group is particularly preferred.

A⁶ in -A⁶-Qp represents a single bond or methylene, and Qp represents a

phenyl group which may be substituted with one of T¹ or two or more of the same or different T¹. The substituent T¹ is a linear or branched saturated alkyl group having 1 to 4 carbon atoms, hydroxyl group, fluorine atom, chlorine atom, bromine atom, trifluoromethyl group, nitro group, an alkoxy group having 1 to 4 carbon atoms, or a mono- or dialkylamino group having 1 to 4 carbon atoms. Specific examples of ·A⁶·Qp include phenyl group, methylphenyl group, chlorophenyl group, benzyl group, methylbenzyl group, chlorobenzyl group, dichlorobenzyl group, fluorobenzyl group, trifluoromethylbenzyl group, nitrobenzyl group, methoxyphenyl group, N-methylaminobenzyl group, N,N-dimethylaminobenzyl group, and the like.

Preferred examples of ·OR⁹ include hydroxyl group, methoxy group, and the like, and hydroxyl group is particularly preferred.

Rn¹ represents hydrogen atom or a linear or branched saturated alkyl group having 1 to 4 carbon atoms, and hydrogen atom is particularly preferred. Examples of the linear or branched saturated alkyl group having 1 to 4 carbon atoms include methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, or t-butyl group, and the like. Among them, methyl group, ethyl group, propyl group, isopropyl group, and the like are preferred examples, and methyl group is particularly preferred.

Rn² has the same meaning as Rn¹, or represents a ·COR²³ group or a ·SO₂R²⁴ group, or binds to Rn¹ to form a 3- to 6-membered ring together with the nitrogen atom to which they bind to form a saturated nitrogen-containing cycloalkyl group or morpholino group.

R²³ represents hydrogen atom, a lower alkyl group having 1 to 4 carbon atoms, a lower alkoxy group having 1 to 4 carbon atoms, ·O·A⁶·Qp, or ·N(R²⁵)(R²⁶). R²⁵ represents hydrogen atom, or a linear or branched saturated alkyl group having 1 to 4 carbon atoms. R²⁶ has the same meaning as R²⁵, or binds to R²⁵ to form a 3- to 6-membered ring together with the nitrogen atom to which they bind to represent a

saturated nitrogen-containing cycloalkyl group or morpholino group. Examples of the compound wherein R²⁶ "binds to R²⁵ to form a 3- to 6-membered ring together with the nitrogen atom to which they bind to represent a saturated nitrogen-containing cycloalkyl group or morpholino group" include, for example, a compound wherein a cyclic aminoalkyl group containing nitrogen atom such as pyrrolidino group, piperazino group and morpholino group is formed.

Specific examples of ·COR²³ include formyl group, acetyl group, t-butyloxycarbonyl group, phenoxy carbonyl group, benzyloxycarbonyl group, carbamoyl group, N-methylcarbamoyl group, N,N-dimethylcarbamoyl group, carboxylic acid-1-carbonyl group, morpholine-4-carbonyl group, and the like, and preferred examples include formyl group, acetyl group, carbamoyl group, and the like. In the aforementioned formulas, as represented by A⁶ and Q_p, for example, the same symbols may sometimes be used simultaneously at different positions. These symbols are used to mean the same class of groups of substituents. However, because each substituent is independently chosen from each other, the same symbols do not mean that an identical substituent should be necessarily chosen, and as a result, selection of the same or different kind of substituent is not prohibited.

R²⁴ represents a lower alkyl group having 1 to 4 carbon atoms, amino group, or a mono- or dialkylamino group having 1 to 4 carbon atoms. Specific examples of ·SO₂R²⁴ include mesyl group, sulfamoyl group, N-methylsulfamoyl group, N,N-dimethylsulfamoyl group, and the like, and preferred examples include mesyl group, N,N-dimethylsulfamoyl group, and the like.

Specific examples of ·N(Rn¹)(Rn²) include amino group, N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino group, N,N-dimethylamino group, N,N-diethylamino group, piperidino group, pyrrolidino group, morpholino group, formylamino group, acetylamino group, t-butyloxycarbonylamino group, phenoxy carbonylamino group,

benzyloxycarbonylamino group, carbamoylamino group, N-methylcarbamoylamino group, N,N-dimethylcarbamoylamino group, piperidine-1-carbonylamino group, morpholine-4-carbonylamino group, mesylamino group, sulfamoylamino group, N-methylsulfamoylamino group, N,N-dimethylsulfamoylamino group, and the like. Among them, preferred examples include amino group, N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino group, N,N-dimethylamino group, N,N-diethylamino group, formylamino group, acetylamino group, carbamoylamino group, mesylamino group, N,N-dimethylsulfamoylamino group, and the like, and amino group, N-methylamino group, and N,N-dimethylamino group are particularly preferred.

Therefore, preferred examples of Zx include fluorine atom, chlorine atom, bromine atom, nitro group, methyl group, hydroxyl group, methoxy group, amino group, N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino group, N,N-dimethylamino group, N,N-diethylamino group, formylamino group, acetylamino group, carbamoylamino group, mesylamino group, N,N-dimethylsulfamoylamino group, and the like, and particularly preferred examples include fluorine atom, methyl group, hydroxyl group, amino group, N-methylamino group, N,N-dimethylamino group, and the like.

In the formula (I), Rx is defined to represent -D-Rx or -N(Ry)(Rz).

D is defined to represent a single bond, oxygen atom, sulfur atom, -S(O)-, -S(O)₂, or -C(O)-. Among them, oxygen atom and sulfur atom are preferred, and oxygen atom is particularly preferred. Another preferred examples include the compounds wherein D represent a single bond.

Rx represents a linear or branched saturated alkyl group having 3 to 8 carbon atoms, or represents Ra, Rb, or Rc mentioned above.

As for Rx, examples of the linear or branched saturated alkyl group having 3 to 8 carbon atoms include, for example, propyl group, isopropyl group, butyl group,

isobutyl group, 1-methylpropyl group, t-butyl group, pentyl group, isopentyl group, 2-methylbutyl group, 2,2-dimethylpropyl group, hexyl group, 4-methylpentyl group, 2,3-dimethylbutyl group, 2-ethylbutyl group, heptyl group, octyl group, and the like, and butyl group, isobutyl group, and 2-ethylbutyl group are particularly preferred.

As for Rx, R¹ of Ra is defined to be a saturated cyclic alkyl group having 3 to 7 carbon atoms substituted with a lower alkyl group having 1 to 4 carbon atoms or an unsubstituted saturated cyclic alkyl group having 3 to 7 carbon atoms, or a condensed saturated cyclic alkyl group having 6 to 8 carbon atoms substituted with a lower alkyl group having 1 to 4 carbon atoms or an unsubstituted condensed saturated cyclic alkyl group having 6 to 8 carbon atoms. As for R¹, examples of the saturated cyclic alkyl group having 3 to 7 carbon atoms include cyclopropyl group, cyclobutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, and the like, and cyclopentyl group, cyclohexyl group, and cycloheptyl group are particularly preferred. As for R¹, examples of the condensed saturated cyclic alkyl group having 6 to 8 carbon atoms group include bicyclo[2,2,1]heptyl group, bicyclo[2,2,2]octyl group, and the like.

Examples of the lower alkyl group having 1 to 4 carbon atoms substituting on R¹ include methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, and the like. Examples of R¹ substituted with a lower alkyl group having 1 to 4 carbon atoms include methylcyclopentyl group, methylcyclohexyl group, methylbicyclo[2,2,1]heptyl group, and the like.

Symbol k is defined to be 0 or an integer of 1 to 3. A single bond where k is 0, methylene where k is 1, and ethylene where k is 2 are preferred, and a bond where k is 0, and methylene where k is 1 are particularly preferred.

Examples of Ra include cyclopropyl group, cyclobutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopropylmethyl group, cyclobutylmethyl group, cyclopentylmethyl group, cyclohexylmethyl group,

cycloheptylmethyl group, 2-cyclopentylethyl group, 2-cyclohexylethyl group, 3-cyclohexylpropyl group, 2-methylcyclopentyl group, 3-methylcyclopentyl group, 3,4-dimethylcyclopentyl group, 4-methylcyclohexyl group, 4,4-dimethylcyclohexyl group, 4-ethylcyclohexyl group, 4-methylcyclohexylmethyl group, bicyclo[2,2,1]heptane-2-methyl group, bicyclo[2,2,2]octane-2-methyl group, 3-methylbicyclo[2,2,1]heptane-2-methyl group, bicyclo[2,2,1]hept-1-ylmethyl group, bicyclo[2,2,2]oct-1-ylmethyl group, and the like. Cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-cyclopentylethyl group, 2-cyclohexylethyl group are preferred, and cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group are particularly preferred.

As for Rx, A² in Rb is defined to be a single bond, oxygen atom, sulfur atom, -S(O)⁻, -S(O)₂⁻, or -N(R⁴)⁻. R⁴ is defined to be a lower alkyl group having 1 to 4 carbon atoms. Preferred examples are methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, and the like, and methyl group and ethyl group are particularly preferred examples. Therefore, particularly preferred examples of A² include a single bond, oxygen atom, sulfur atom, -N(methyl)⁻, and -N(ethyl)⁻.

A¹ is defined to be a single bond or an alkylene (a) having 1 to 3 carbon atoms, i.e., methylene, ethylene or trimethylene. However, when A² represents oxygen atom, sulfur atom, -S(O)⁻, -S(O)₂⁻ or -N(R⁴)⁻, A¹ is ethylene or trimethylene. Further, the alkylene (a) may be substituted with a lower alkyl group having 1 to 4 carbon atoms or phenyl group. Examples of the lower alkyl group having 1 to 4 carbon atoms for the above compound include methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, and the like, and methyl group, and ethyl group are preferred examples. Specific examples of A¹ include methylene, methylmethylenes, ethylmethylenes, phenylmethylenes, ethylene,

methylene, dimethylene, ethylene, phenylene, trimethylene, methyltrimethylene, and the like. Among them, when A² represents a single bond, A¹ is most preferably a single bond, or methylene, methylmethylen, or ethylene. Further, when A² represents oxygen atom, sulfur atom, -S(O)-, -S(O)₂- or -N(R⁴)-, A¹ is most preferably ethylene.

Q in Rb is defined to be a residue of a partially unsaturated or completely unsaturated monocyclic or condensed bicyclic carbon ring or heterocyclic ring (q), and the heterocyclic ring (q) means a ring containing 1 to 4 the same or different ring constituting heteroatoms selected from the group consisting of nitrogen atom, oxygen atom, and sulfur atom. The term "residue" means a monovalent group formed by eliminating hydrogen atom bonding to a ring constituting atom. The residue of monocyclic carbon ring or heterocyclic ring is a partially unsaturated or completely unsaturated substituent having 5 to 7 atoms, and examples include, for example, phenyl group, thienyl group, furyl group, pyrrolyl group, pyridyl group, oxazolyl group, isoxazolyl group, thiazolyl group, isothiazolyl group, imidazolyl group, pyrazolyl group, oxadiazolyl group, thiadiazolyl group, triazolyl group, tetrazolyl group, and the like. Among them, phenyl group, thienyl group, furyl group, pyridyl group, and oxazolyl group are preferred examples, and phenyl group is particularly preferred.

The condensed bicyclic carbon ring or heterocyclic ring is a partially unsaturated or completely unsaturated ring having 8 to 11 atoms, and examples of residue thereof include, for example, naphthyl group, tetrahydronaphthyl group, indanyl group, indenyl group, quinolyl group, isoquinolyl group, indolyl group, benzofuryl group, benzothienyl group, benzimidazolyl group, benzoxazolyl group, benzothiazolyl group, indazolyl group, 4H-chromenyl group, dihydrobenzodioxyl group, benzoisoxazolyl group, pyrrolopyridinyl group, pyrazolopyridinyl group, triazolopyridinyl group, thienopyridinyl group, thienopyrazolyl group,

1,3-dihydrobenzimidazole group, dihydro-3H-benzoxazole group, dihydro-3H-benzothiazole group, and the like. Among them, naphthyl group, tetrahydronaphthyl group, indanyl group, indolyl group, and dihydrobenzodioxyl group are preferred examples, and indanyl group is one of particularly preferred examples.

Q binds to A² at an arbitrary position on the ring. Preferred examples of Q with indication of bonding position include phenyl group, 2- or 3-thienyl group, 2- or 3-furyl group, 2-, 3- or 4-pyridyl group, 2-, 4- or 5-oxazolyl group, 1- or 2-naphthyl group, 1-, 2-, 5- or 6-tetrahydronaphthyl group, indan-1-yl group, indan-2-yl group, indan-4-yl group, indan-5-yl group, 1-, 2-, 3-, 4-, 5-, 6-, or 7-indolyl group, 2-, 5- or 6-dihydrobenzodioxyl group, and the like. Among them, phenyl group, and indan-2-yl group are particularly preferred.

In R_b, R² and R³ are defined to be substituents of Q, and independently represent hydrogen atom, a linear or branched saturated alkyl group having 1 to 4 carbon atoms, oxo group, thioxo group, fluorine atom, chlorine atom, bromine atom, trifluoromethyl group, -OR⁶, -N(R⁶)(R⁶'), -NHCOR⁷, -NHSO₂R⁸, or -A⁶-Q_a, or bind to each other to represent methylenedioxy group.

Examples of the linear or branched saturated alkyl group having 1 to 4 carbon atoms include methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, and the like, and methyl group is particularly preferred.

R⁶ in -N(R⁶)(R⁶') represents hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms. R⁶' has the same meaning as R⁶, or binds to R⁶ to form a 3- to 6-membered ring together with the nitrogen atom to which they bind to form a saturated nitrogen-containing cycloalkyl group or morpholino group. Therefore, specific examples of -N(R⁶)(R⁶') include amino group, N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino group,

N,N-dimethylamino group, N,N-diethylamino group, piperidino group, pyrrolidino group, morpholino group, and the like. N,N-Dimethylamino group, piperidino group, morpholino group, and the like are preferred examples, and N,N-dimethylamino group is a particularly preferred example.

R⁵ and R⁷ are defined to independently represent hydrogen atom, a lower alkyl group having 1 to 4 carbon atoms, or a -A⁶-Qa group. Examples of the lower alkyl group having 1 to 4 carbon atoms include methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, and the like, and among them, methyl group is a preferred example.

A⁶ in -A⁶-Qa has the same meaning as that defined above. Qa is defined to be a partially unsaturated or completely unsaturated monocyclic or condensed bicyclic carbon ring or heterocyclic ring (qa), and the heterocyclic ring (qa) means a substituent containing 1 to 4 the same or different ring-constituting heteroatoms selected from the group consisting of nitrogen atom, oxygen atom, and sulfur atom. The monocyclic carbon ring or heterocyclic ring is a partially unsaturated or completely unsaturated ring having 5 to 7 atoms, and examples of residue thereof include, for example, phenyl group, thienyl group, furyl group, pyrrolyl group, pyridyl group, oxazolyl group, isoxazolyl group, thiazolyl group, isothiazolyl group, imidazolyl group, pyrazolyl group, oxadiazolyl group, thiadiazolyl group, triazolyl group, tetrazolyl group, and the like. The condensed bicyclic carbon ring or heterocyclic ring is a partially unsaturated or completely unsaturated ring having 8 to 11 atoms, and examples of residue thereof include, for example, naphthyl group, indanyl group, indenyl group, quinolyl group, isoquinolyl group, indolyl group, benzofuryl group, benzothienyl group, benzimidazolyl group, benzoxazolyl group, benzothiazolyl group, indazolyl group, and the like.

Qa binds to A⁶ at an arbitrary position on the ring. Further, Qa may be substituted with two or more of the same or different T¹. T¹ has the same meaning

as defined above.

Specific examples of $\text{-A}^6\text{-Qa}$ include phenyl group, methylphenyl group, chlorophenyl group, benzyl group, methylbenzyl group, chlorobenzyl group, dichlorobenzyl group, fluorobenzyl group, trifluoromethylbenzyl group, nitrobenzyl group, methoxyphenyl group, N-methylaminobenzyl group, N,N-dimethylaminobenzyl group, furyl group, thienyl group, pyrrolyl group, pyridyl group, oxazolyl group, isoxazolyl group, thiazolyl group, isothiazolyl group, imidazolyl group, pyrazolyl group, oxadiazolyl group, thiadiazolyl group, triazolyl group, tetrazolyl group, naphthyl group, indanyl group, indenyl group, quinolyl group, isoquinolyl group, indolyl group, benzofuryl group, benzothienyl group, benzimidazolyl group, benzoxazolyl group, benzothiazolyl group, indazolyl group, and the like.

R^8 each defined to be a lower alkyl group having 1 to 4 carbon atoms, and examples of the lower alkyl group having 1 to 4 carbon atoms include methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, and the like.

Therefore, preferred examples of R^2 and R^3 include hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, dimethylamino group, acetyl amino group, and methylsulfonyl amino group, and hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, and dimethylamino group are particularly preferred. When Q represents phenyl group, A^1 represents a single bond, or unsubstituted methylene, and A^2 represents a single bond, at least one of R^2 and R^3 preferably represents a substituent other than hydrogen atom.

Particularly preferred examples of Rb include 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl

group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group,

2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group,
2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group,
2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group,
2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group,
2-(N-phenyl-N-methylamino)ethyl group, 2-(N-ethyl-N-phenylamino)ethyl group,
and the like.

Symbol p in R_c is defined to be an integer of 2 to 4. Ethylene where p is 2, and trimethylene where p is 3 are preferred, and ethylene where p is 2 is particularly preferred. A⁴ represents a single bond, or represents methylene or ethylene, and a single bond and methylene are particularly preferred. A⁵ represents -C(O)-, -C(S)-, or -S(O)₂, and all of them are preferred. R_d represents hydrogen atom, an alkyl group having 1 to 8 carbon atoms, or group Q_a. R_e represents an alkyl group having 1 to 8 carbon atoms, a -A⁶-Q_a group, a -(CH₂)_iR¹⁴ group, a -OR²⁸ group, a -SR²⁸ group, or a -N(R²⁹)(R³⁰) group. The group Q_a and -A⁶-Q_a have the same meanings as defined above.

The alkyl group having 1 to 8 carbon atoms is a linear or branched saturated alkyl group or a linear or branched partially unsaturated alkyl group, or an alkyl group which may contain a cycloalkyl group having 3 to 7 carbon atoms, and examples include, for example, methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, pentyl group, isopentyl group, 2-methylbutyl group, 2,2-dimethylpropyl group, hexyl group, 4-methylpentyl group, 2,3-dimethylbutyl group, 2-ethylbutyl group, heptyl group, octyl group, cyclopropyl group, cyclobutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopropylmethyl group, cyclobutylmethyl group, cyclopentylmethyl group, cyclohexylmethyl group, cycloheptylmethyl group, 2-cyclopentylethyl group, 2-cyclohexylethyl group, 2-methylcyclopentyl group, 3-methylcyclopentyl group, 3,4-dimethylcyclopentyl group, 4-methylcyclohexyl group, 4,4-dimethylcyclohexyl

group, 4-ethylcyclohexyl group, 4-methylcyclohexylmethyl group, and the like.

Symbol i in -(CH₂)R¹⁴ represents an integer of 1 to 3, and R¹⁴ represents hydroxyl group, an alkoxy group having 1 to 4 carbon atoms, carboxyl group, or an N,N-dialkylcarbamoyl group having 1 to 4 carbon atoms. Examples of the alkoxy group having 1 to 4 carbon atoms include methoxy group, ethoxy group, propyloxy group, isopropyloxy group, butoxy group, isobutyloxy group, t-butyoxy group, and the like. Examples of the N,N-dialkylcarbamoyl group having 1 to 4 carbon atoms include N,N-dimethylcarbamoyl group, N,N-diethylcarbamoyl group, and the like.

R²⁸ in -OR²⁸ or -SR²⁸ represents an alkyl group having 1 to 8 carbon atoms, or -A⁶-Qa, and these have the same meanings as defined above.

R²⁹ in -N(R²⁹)(R³⁰) represents an alkyl group having 1 to 8 carbon atoms, an alkoxy carbonyl group having 1 to 4 carbon atoms, or -A⁶-Qa. Among them, the alkyl group having 1 to 8 carbon atoms and -A⁶-Qa have the same meanings as those defined above. Examples of the alkoxy carbonyl group having 1 to 4 carbon atoms include methoxycarbonyl group, ethoxycarbonyl group, propyloxycarbonyl group, isopropyloxycarbonyl group, butyloxycarbonyl group, isobutyloxycarbonyl group, t-butyoxy carbonyl group, and the like. R³⁰ represents hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms, or binds to R²⁹ to form a 3- to 6-membered ring together with the nitrogen atom to which they bind to form a saturated nitrogen-containing cycloalkyl group or morpholino group. The lower alkyl group having 1 to 4 carbon atoms has the same meaning as defined above. Examples of the compound where "R³⁰ binds to R²⁹ to form a 3- to 6-membered ring together with the nitrogen atom to which they bind to form a saturated nitrogen-containing cycloalkyl group or morpholino group" include, for example, a compound wherein a cyclic aminoalkyl group containing nitrogen atom such as pyrrolidino group, piperazino group, and morpholino group is formed.

Preferred examples of Rd include hydrogen atom as well as methyl group,

ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, cyclopropyl group, cyclopropylmethyl group, cyclopentyl group, cyclopentylmethyl group, cyclohexyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorobenzyl group, 4-fluorobenzyl group, pyridin-2-yl group, pyridin-3-yl group, pyridin-4-yl group, and the like.

Particularly preferred examples of Rd include methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, and the like.

Preferred examples of substituted ·A⁴-Rd include methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, pentyl group, isoamyl group, cyclopropyl group, cyclopropylmethyl group, 2-(cyclopropyl)ethyl group, cyclopentyl group, cyclopentylmethyl group, 2-(cyclopentyl)ethyl group, cyclohexyl group, cyclohexylmethyl group, 2-(cyclohexyl)ethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, 2-(4-chlorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, pyridin-2-yl group, pyridin-3-yl group, pyridin-4-yl group, (pyridin-2-yl)methyl group, (pyridin-3-yl)methyl group, (pyridin-4-yl)methyl group, and the like.

Particularly preferred examples of substituted ·A⁴-Rd include methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, pentyl group, isoamyl group, cyclopropyl group, cyclopropylmethyl group, cyclopentyl group, cyclopentylmethyl group, cyclohexyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, 2-(4-chlorophenyl)ethyl

group, 2-(4-fluorophenyl)ethyl group, and the like.

Preferred examples of Re include methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, cyclopentylmethyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, phenylmethyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, pyridin-4-yl group, furan-2-yl group, furan-3-yl group, thiophen-2-yl group, thiophen-3-yl group, methoxy group, ethoxy group, propyloxy group, isopropyloxy group, butyloxy group, isobutyloxy group, t-butyloxy group, cyclopropyloxy group, cyclopentyloxy group, cyclohexyloxy group, cyclopentylmethoxy group, cyclohexylmethoxy group, phenoxy group, 4-methylphenoxy group, 4-chlorophenoxy group, 4-fluorophenoxy group, methylthioxo group, amino group, N-methylamino group, N,N-dimethylamino group, N-ethylamino group, N,N-diethylamino group, N-propylamino group, N-isopropylamino group, N-butylamino group, N-isobutylamino group, N-t-butylamino group, N-cyclopropylamino group, N-cyclopentylamino group, N-cyclohexylamino group, N-phenylamino group, N-(4-methylphenyl)amino group, N-(4-chlorophenyl)amino group, N-(4-fluorophenyl)amino group, N-(pyridin-2-yl)amino group, N-(pyridin-3-yl)amino group, N-(pyridin-4-yl)amino group, N-(furan-2-yl)amino group, N-(furan-3-yl)amino group, N-(thiophen-2-yl)amino group, N-(thiophen-3-yl)amino group, pyrrolidino group, piperidino group, morpholino group, methyloxycarbonylamino group, ethyloxycarbonylamino group, and the like.

Particularly preferred examples of Re include isopropyl group, butyl group, isobutyl group, t-butyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, cyclopentylmethyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, propyloxy group, isopropyloxy

group, butyloxy group, isobutyloxy group, t-butyloxy group, cyclopropoxy group, cyclopentyloxy group, cyclohexyloxy group, cyclopentylmethoxy group, cyclohexylmethoxy group, phenoxy group, 4-methylphenyloxy group, 4-chlorophenyloxy group, 4-fluorophenyloxy group, N-propylamino group, N-isopropylamino group, N-butylamino group, N-isobutylamino group, N-t-butylamino group, N-cyclopropylamino group, N-cyclopentylamino group, N-cyclohexylamino group, N-phenylamino group, N-(4-methylphenyl)amino group, N-(4-chlorophenyl)amino group, N-(4-fluorophenyl)amino group, pyrrolidino group, piperidino group, morpholino group, and the like.

Preferred examples of $\text{A}^5\text{-Re}$ include acetyl group, thioacetyl group, methanesulfonyl group, propionyl group, ethylthiocarbonyl group, butyryl group, propylthiocarbonyl group, isobutyryl group, isopropylthiocarbonyl group, isopropylsulfonyl group, valeryl group, butylthiocarbonyl group, isovaleryl group, isobutylthiocarbonyl group, pivaloyl group, t-butylthiocarbonyl group, cyclopropylcarbonyl group, cyclopropylthiocarbonyl group, cyclopentylcarbonyl group, cyclopentylthiocarbonyl group, cyclohexylcarbonyl group, cyclohexylthiocarbonyl group, cyclopentylmethylcarbonyl group, cyclopentylmethythiocarbonyl group, cyclohexylmethylthiocarbonyl group, benzoyl group, thiobenzoyl group, phenylsulfonyl group, 4-methylphenylcarbonyl group, 4-methylphenylthiocarbonyl group, 4-methylphenylsulfonyl group, 4-chlorophenylcarbonyl group, 4-chlorophenylthiocarbonyl group, 4-fluorophenylcarbonyl group, 4-fluorophenylthiocarbonyl group, phenylmethylcarbonyl group, 4-methylphenylmethylcarbonyl group, 4-chlorophenylmethylcarbonyl group, 4-fluorophenylmethylcarbonyl group, (pyridin-2-yl)carbonyl group, (pyridin-2-yl)thiocarbonyl group, (pyridin-3-yl)carbonyl group, (pyridin-4-yl)carbonyl group, (furan-2-yl)carbonyl group, (thiophen-2-yl)carbonyl

group, methyloxycarbonyl group, methylsulfanylcarbonyl group,
methyloxythiocarbonyl group, methyloxycarbonylaminocarbonyl group, carbamoyl
group, N-methylcarbamoyl group, N-methylthiocarbamoyl group,
N,N-dimethylcarbamoyl group, N,N-dimethylthiocarbamoyl group,
N,N-dimethylsulfamoyl group, ethyloxycarbonyl group,
ethyloxycarbonylaminocarbonyl group, N-ethylcarbamoyl group,
N-ethylthiocarbamoyl group, N,N-diethylcarbamoyl group,
N,N-diethylthiocarbamoyl group, N,N-diethylsulfamoyl group, propyloxycarbonyl
group, N-propylcarbamoyl group, N-propylthiocarbamoyl group,
isopropyloxycarbonyl group, N-isopropylcarbamoyl group, N-isopropylthiocarbamoyl
group, butyloxycarbonyl group, N-butylcarbamoyl group, N-butylthiocarbamoyl
group, isobutyloxycarbonyl group, N-isobutylcarbamoyl group,
N-isobutylthiocarbamoyl group, t-butyloxycarbonyl group, N-t-butylcarbamoyl
group, N-t-butylthiocarbamoyl group, cyclopropyloxycarbonyl group,
N-cyclopropylcarbamoyl group, N-cyclopropylthiocarbamoyl group,
cyclopentyloxycarbonyl group, N-cyclopentylcarbamoyl group,
N-cyclopentylthiocarbamoyl group, cyclohexyloxycarbonyl group,
N-cyclohexylcarbamoyl group, N-cyclohexylthiocarbamoyl group,
cyclopentylmethyloxycarbonyl group, cyclohexylmethyloxycarbonyl group,
phenyloxycarbonyl group, N-phenylcarbamoyl group, N-phenylthiocarbamoyl group,
4-methylphenyloxycarbonyl group, N-(4-methylphenyl)carbamoyl group,
N-(4-methylphenyl)thiocarbamoyl group, 4-chlorophenyloxycarbonyl group,
N-(4-chlorophenyl)carbamoyl group, N-(4-chlorophenyl)thiocarbamoyl group,
4-fluorophenyloxycarbonyl group, N-(4-fluorophenyl)carbamoyl group,
N-(4-fluorophenyl)thiocarbamoyl group, phenylmethyloxycarbonyl group,
4-methylphenylmethyloxycarbonyl group, 4-chlorophenylmethyloxycarbonyl group,
4-fluorophenylmethyloxycarbonyl group, N-(pyridin-2-yl)carbamoyl group,

N-(pyridin-2-yl)thiocarbamoyl group, N-(pyridin-3-yl)carbamoyl group,
N-(pyridin-3-yl)thiocarbamoyl group, N-(pyridin-4-yl)carbamoyl group,
N-(pyridin-4-yl)thiocarbamoyl group, N-(furan-2-yl)carbamoyl group,
N-(thiophen-2-yl)carbamoyl group, (pyrrolidino-1-yl)carbonyl group,
(piperidino-1-yl)carbonyl group, (morpholino-4-yl)carbonyl group, and the like.

Particularly preferred examples of -A⁵-Re include isobutyryl group, isopropylthiocarbonyl group, isopropylsulfonyl group, valeryl group, butylthiocarbonyl group, isovaleryl group, isobutylthiocarbonyl group, pivaloyl group, t-butylthiocarbonyl group, cyclopropylcarbonyl group, cyclopropylthiocarbonyl group, cyclohexylcarbonyl group, cyclohexylthiocarbonyl group, cyclopentylmethylcarbonyl group, cyclopentylmethylthiocarbonyl group, cyclohexylmethylcarbonyl group, cyclohexylmethylthiocarbonyl group, benzoyl group, thiobenzoyl group, phenylsulfonyl group, 4-methylphenylcarbonyl group, 4-methylphenylthiocarbonyl group, 4-methylphenylsulfonyl group, 4-chlorophenylcarbonyl group, 4-chlorophenylthiocarbonyl group, 4-fluorophenylcarbonyl group, 4-fluorophenylthiocarbonyl group, isopropyloxycarbonyl group, N-isopropylcarbamoyl group, N-isopropylthiocarbamoyl group, butyloxycarbonyl group, N-butyloxycarbonyl group, N-butylythiocarbamoyl group, isobutyloxycarbonyl group, N-isobutyloxycarbonyl group, N-isobutylthiocarbamoyl group, t-butyloxycarbonyl group, N-t-butyloxycarbonyl group, N-t-butylthiocarbamoyl group, cyclopropylcarbonyl group, N-cyclopropylthiocarbonyl group, cyclopentylloxycarbonyl group, N-cyclopentylcarbamoyl group, N-cyclopentylthiocarbamoyl group, cyclohexylcarbonyl group, N-cyclohexylthiocarbonyl group, cyclopentylmethyloxycarbonyl group, cyclohexylmethyloxycarbonyl group,

phenyloxycarbonyl group, N-phenylcarbamoyl group, N-phenylthiocarbamoyl group, 4-methylphenyloxycarbonyl group, N-(4-methylphenyl)carbamoyl group, N-(4-methylphenyl)thiocarbamoyl group, 4-chlorophenyloxycarbonyl group, N-(4-chlorophenyl)carbamoyl group, N-(4-chlorophenyl)thiocarbamoyl group, 4-fluorophenyloxycarbonyl group, N-(4-fluorophenyl)carbamoyl group, N-(4-fluorophenyl)thiocarbamoyl group, (pyrrolidino-1-yl)carbonyl group, (piperidino-1-yl)carbonyl group, (morpholino-4-yl)carbonyl group, and the like.

Specific examples of Rc include 2-(N-isobutyryl-N-methylamino)ethyl group, 2-(N-ethyl-N-isobutyrylamino)ethyl group, 2-(N-isobutyryl-N-propylamino)ethyl group, 2-(N-isobutyryl-N-isopropylamino)ethyl group, 2-(N-butyl-N-isobutyrylamino)ethyl group, 2-(N-isobutyl-N-isobutyrylamino)ethyl group, 2-(N-cyclopropyl-N-isobutyrylamino)ethyl group, 2-(N-cyclopentyl-N-isobutyrylamino)ethyl group, 2-(N-cyclopentylmethyl-N-isobutyrylamino)ethyl group, 2-(N-cyclohexyl-N-isobutyrylamino)ethyl group, 2-(N-cyclohexylmethyl-N-isobutyrylamino)ethyl group, 2-(N-isobutyryl-N-phenylamino)ethyl group, 2-[N-isobutyryl-N-(4-methylphenyl)amino]ethyl group, 2-[N-(4-chlorophenyl)-N-isobutyrylamino]ethyl group, 2-[N-(4-fluorophenyl)-N-isobutyrylamino]ethyl group, 2-(N-benzyl-N-isobutyrylamino)ethyl group, 2-[N-(4-chlorophenylmethyl)-N-isobutyrylamino]ethyl group, 2-[N-(4-fluorophenylmethyl)-N-isobutyrylamino]ethyl group, 2-[N-[2-(4-chlorophenyl)ethyl]-N-isobutyrylamino]ethyl group, 2-[N-[2-(4-fluorophenyl)ethyl]-N-isobutyrylamino]ethyl group, 2-(N-isobutylthiocarbonyl-N-methylamino)ethyl group, 2-(N-isobutylthiocarbonyl-N-isopropylamino)ethyl group,

2-(N-butyl-N-isobutylthiocarbonylamino)ethyl group,
2-(N-isobutyl-N-isobutylthiocarbonylamino)ethyl group,
2-(N-cyclopentyl-N-isobutylthiocarbonylamino)ethyl group,
2-(N-cyclopentylmethyl-N-isobutylthiocarbonylamino)ethyl group,
2-(N-isobutylthiocarbonyl-N-phenylamino)ethyl group,
2-(N-benzyl-N-isobutylthiocarbonylamino)ethyl group,
2-[N-(4-fluorophenylmethyl)-N-isobutylthiocarbonylamino]ethyl group,
2-(N-methyl-N-pivaloylamino)ethyl group, 2-(N-isopropyl-N-pivaloylamino)ethyl group, 2-(N-butyl-N-pivaloylamino)ethyl group, 2-(N-isobutyl-N-pivaloylamino)ethyl group, 2-(N-cyclohexyl-N-pivaloylamino)ethyl group,
2-(N-cyclohexylmethyl-N-pivaloylamino)ethyl group,
2-(N-phenyl-N-pivaloylamino)ethyl group, 2-(N-benzyl-N-pivaloylamino)ethyl group,
2-(N-cyclopentylcarbonyl-N-methylamino)ethyl group,
2-(N-butyl-N-cyclopentylcarbonylamino)ethyl group,
2-(N-cyclopentylcarbonyl-N-isobutylamino)ethyl group,
2-(N-cyclopentylcarbonyl-N-cyclopentylmethy lamino)ethyl group,
2-(N-cyclopentylcarbonyl-N-phenylamino)ethyl group,
2-[N-cyclopentylcarbonyl-N-(4-fluorophenyl)amino]ethyl group,
2-(N-benzyl-N-cyclopentylcarbonylamino)ethyl group,
2-[N-cyclopentylcarbonyl-N-(4-fluorophenylmethyl)aminolethyl group,
2-(N-methyl-N-phenylsulfonylamino)ethyl group,
2-(N-ethyl-N-phenylsulfonylamino)ethyl group,
2-(N-phenylsulfonyl-N-propylamino)ethyl group,
2-(N-isopropyl-N-phenylsulfonylamino)ethyl group,
2-(N-butyl-N-phenylsulfonylamino)ethyl group,
2-(N-isobutyl-N-phenylsulfonylamino)ethyl group,
2-(N-cyclopropyl-N-phenylsulfonylamino)ethyl group,

2-(N-cyclopentyl-N-phenylsulfonylamino)ethyl group,
2-(N-cyclopentylmethyl-N-phenylsulfonylamino)ethyl group,
2-(N-cyclohexyl-N-phenylsulfonylamino)ethyl group,
2-(N-cyclohexylmethyl-N-phenylsulfonylamino)ethyl group,
2-(N-phenyl-N-phenylsulfonylamino)ethyl group,
2-[N-(4-fluorophenyl)-N-phenylsulfonylamino]ethyl group,
2-(N-benzyl-N-phenylsulfonylamino)ethyl group,
2-[N-(N-butylcarbamoyl)-N-methylamino]ethyl group,
2-[N-(N-butylcarbamoyl)-N-(N-butylcarbamoyl)amino]ethyl group,
2-[N-(N-butylcarbamoyl)-N-isobutylamino]ethyl group,
2-[N-(N-butylcarbamoyl)-N-cyclopentylamino]ethyl group,
2-[N-(N-butylcarbamoyl)-N-cyclohexylmethyleamino]ethyl group,
2-[N-(N-butylcarbamoyl)-N-phenylamino]ethyl group,
2-[N-(N-butylcarbamoyl)-N-(4-fluorophenyl)amino]ethyl group,
2-[N-benzyl-N-(N-butylcarbamoyl)amino]ethyl group,
2-[N-(N-butylcarbamoyl)-N-(4-fluorophenylmethyl)amino]ethyl group,
2-[N-(N-butylcarbamoyl)-N-[2-(4-fluorophenyl)ethyl]amino]ethyl group,
2-[N-(N-isopropylthiocarbamoyl)-N-methylamino]ethyl group,
2-[N-butyl-N-(N-isopropylthiocarbamoyl)amino]ethyl group,
2-[N-isobutyl-N-(N-isopropylthiocarbamoyl)amino]ethyl group,
2-[N-cyclopentyl-N-(N-isopropylthiocarbamoyl)amino]ethyl group,
2-[N-cyclohexylmethyl-N-(N-isopropylthiocarbamoyl)amino]ethyl group,
2-[N-(N-isopropylthiocarbamoyl)-N-phenylamino]ethyl group,
2-[N-(4-fluorophenyl)-N-(N-isopropylthiocarbamoyl)amino]ethyl group,
2-[N-benzyl-N-(N-isopropylthiocarbamoyl)amino]ethyl group,
2-(N-isobutyloxycarbonyl-N-methylamino)ethyl group,
2-(N-butyl-N-isobutyloxycarbonylamino)ethyl group,

2-(N-isobutyl-N-isobutyloxycarbonylamino)ethyl group,
2-(N-cyclopentyl-N-isobutyloxycarbonylamino)ethyl group,
2-(N-cyclohexylmethyl-N-isobutyloxycarbonylamino)ethyl group,
2-(N-isobutyloxycarbonyl-N-phenylamino)ethyl group,
2-[N-(4-fluorophenyl)-N-isobutyloxycarbonylamino]ethyl group,
2-(N-benzyl-N-isobutyloxycarbonylamino)ethyl group,
2-[N-(N-cyclopentylcarbamoyl)-N-methylamino]ethyl group,
2-[N-butyl-N-(N-cyclopentylcarbamoyl)amino]ethyl group,
2-[N-(N-cyclopentylcarbamoyl)-N-isobutylamino]ethyl group,
2-[N-cyclopentyl-N-(N-cyclopentylcarbamoyl)amino]ethyl group,
2-[N-cyclohexylmethyl-N-(N-cyclopentylcarbamoyl)amino]ethyl group,
2-[N-(N-cyclopentylcarbamoyl)-N-phenylamino]ethyl group,
2-[N-benzyl-N-(N-cyclopentylcarbamoyl)amino]ethyl group,
2-[N-(N-cyclohexylthiocarbamoyl)-N-methylamino]ethyl group,
2-[N-butyl-N-(N-cyclohexylthiocarbamoyl)amino]ethyl group,
2-[N-(N-cyclohexylthiocarbamoyl)-N-isobutylamino]ethyl group,
2-[N-(N-cyclohexylthiocarbamoyl)-N-cyclopentylamino]ethyl group,
2-[N-cyclohexylmethyl-N-(N-cyclohexylthiocarbamoyl)amino]ethyl group,
2-[N-(N-cyclohexylthiocarbamoyl)-N-phenylamino]ethyl group,
2-[N-benzyl-N-(N-cyclohexylthiocarbamoyl)amino]ethyl group,
2-(N-methyl-N-phenyloxycarbonylamino)ethyl group,
2-(N-butyl-N-phenyloxycarbonylamino)ethyl group,
2-(N-isobutyl-N-phenyloxycarbonylamino)ethyl group,
2-(N-cyclopentyl-N-phenyloxycarbonylamino)ethyl group,
2-(N-cyclohexylmethyl-N-phenyloxycarbonylamino)ethyl group,
2-(N-phenyl-N-phenyloxycarbonylamino)ethyl group,
2-(N-benzyl-N-phenyloxycarbonylamino)ethyl group,

2-[N-methyl-N-(N-phenylcarbamoyl)aminoethyl group,
2-[N-butyl-N-(N-phenylcarbamoyl)aminoethyl group,
2-[N-isobutyl-N-(N-phenylcarbamoyl)aminoethyl group,
2-[N-cyclopentyl-N-(N-phenylcarbamoyl)aminoethyl group,
2-[N-cyclohexylmethyl-N-(N-phenylcarbamoyl)aminoethyl group,
2-[N-phenyl-N-(N-phenylcarbamoyl)aminoethyl group,
2-[N-benzyl-N-(N-phenylcarbamoyl)aminoethyl group, and the like.

When R_s in the formula (I) represents -N(Ry)(Rz), Rz is defined to have the same meaning as Rx, or Rz represents methyl group, ethyl group, or a -A⁵-Re group. -A⁵-Re has the same meaning as defined above.

Particularly preferred examples of Rz include butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl

group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group,
4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group,
2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group,
3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group,
2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group,
2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group,
3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group,
2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group,
4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group,
2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group,
2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group,
2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group,
2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group,
2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group,
2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group,
2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group,
2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group,
2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group,
2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group,
2-(N-phenyl-N-methylamino)ethyl group, 2-(N-ethyl-N-phenylamino)ethyl group,
isobutyryl group, isopropylthiocarbonyl group, isopropylsulfonyl group, valeryl
group, butylthiocarbonyl group, isovaleryl group, isobutylthiocarbonyl group,
pivaloyl group, t-butylthiocarbonyl group, cyclopropylcarbonyl group,
cyclopropylthiocarbonyl group, cyclopentylcarbonyl group, cyclopentylthiocarbonyl
group, cyclohexylcarbonyl group, cyclohexylthiocarbonyl group,
cyclopentylmethylcarbonyl group, cyclopentylmethylthiocarbonyl group,
cyclohexylmethylcarbonyl group, cyclohexylmethylthiocarbonyl group, benzoyl

group, thiobenzoyl group, phenylsulfonyl group, 4-methylphenylcarbonyl group, 4-methylphenylthiocarbonyl group, 4-methylphenylsulfonyl group, 4-chlorophenylcarbonyl group, 4-chlorophenylthiocarbonyl group, 4-fluorophenylcarbonyl group, 4-fluorophenylthiocarbonyl group, isopropoxy carbonyl group, N-isopropylcarbamoyl group, N-isopropylthiocarbamoyl group, butyloxycarbonyl group, N-butylcarbamoyl group, N-butylthiocarbamoyl group, isobutyloxycarbonyl group, N-isobutylcarbamoyl group, N-isobutylthiocarbamoyl group, t-butyloxycarbonyl group, N-t-butylcarbamoyl group, N-t-butylthiocarbamoyl group, N-cyclopropylcarbamoyl group, N-cyclopropylthiocarbamoyl group, cyclopentyl oxycarbonyl group, N-cyclopentylcarbamoyl group, N-cyclopentylthiocarbamoyl group, cyclohexyl oxycarbonyl group, N-cyclohexylthiocarbamoyl group, cyclopentylmethyloxycarbonyl group, cyclohexylmethyloxycarbonyl group, phenoxy carbonyl group, N-phenylcarbamoyl group, N-phenylthiocarbamoyl group, 4-methylphenoxy carbonyl group, N-(4-methylphenyl)carbamoyl group, N-(4-methylphenyl)thiocarbamoyl group, N-(4-chlorophenyl)carbamoyl group, N-(4-chlorophenyl)thiocarbamoyl group, 4-fluorophenoxy carbonyl group, N-(4-fluorophenyl)carbamoyl group, N-(4-fluorophenyl)thiocarbamoyl group, (pyrrolidino-1-yl)carbonyl group, (piperidino-1-yl)carbonyl group, (morpholino-4-yl)carbonyl group, and the like.

Among the R_z, methyl group or ethyl group is particularly preferred when R_y is other than hydrogen atom.

R_y represents hydrogen atom, an alkyl group having 1 to 8 carbon atoms, or a -A⁶-Q_p group, or binds to R_z to form a saturated or unsaturated nitrogen-containing cyclic substituent having 3 to 7 atoms together with nitrogen atom to which they bind. The alkyl group having 1 to 8 carbon atoms is a linear or

branched saturated alkyl group, a linear or branched partially unsaturated alkyl group, or an alkyl group which may contain a cyclic alkyl group having 3 to 7 carbon atoms. Examples include methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, pentyl group, isopentyl group, 2-methylbutyl group, 2,2-dimethylpropyl group, hexyl group, 4-methylpentyl group, 2,3-dimethylbutyl group, 2-ethylbutyl group, heptyl group, octyl group, cyclopropyl group, cyclobutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopropylmethyl group, cyclobutylmethyl group, cyclopentylmethyl group, cyclohexylmethyl group, cycloheptylmethyl group, 2-cyclopentylethyl group, 2-cyclohexylethyl group, 2-methylcyclopentyl group, 3-methylcyclopentyl group, 3,4-dimethylcyclopentyl group, 4-methylcyclohexyl group, 4,4-dimethylcyclohexyl group, 4-ethylcyclohexyl group, 4-methylcyclohexylmethyl group, and the like. -A⁶-Q_p has the same meaning as defined above.

Particularly preferred examples of Ry include hydrogen atom, methyl group, ethyl group, isobutyl group, and the like.

Ry also binds to Rz to represents a saturated or unsaturated nitrogen-containing cyclic substituent having 3 to 7 atoms formed together with the nitrogen atom to which they bind. Specific examples thereof include cyclic substituents containing nitrogen atom such as 1-pyrrolidino group, 1-piperidino group, 1-homopiperidino group, 1-piperazino group, 4-morpholino group, pyrrol-1-yl group, imidazol-1-yl group, and pyrazol-1-yl group, and all of these are preferred.

The nitrogen-containing cyclic substituent may be substituted with one or two lower alkyl groups having 1 to 4 carbon atoms wherein the two alkyl groups may be the same or different. Examples of the lower alkyl having 1 to 4 carbon atoms include methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, or t-butyl group.

Among the substituent -N(Ry)(Rz), particularly preferred examples include

N,N-dimethylamino group, N-ethyl-N-methylamino group, N,N-diethylamino group,
N-methyl-N-propylamino group, N-ethyl-N-propylamino group,
N-isopropyl-N-methylamino group, N-ethyl-N-isopropylamino group, N-butylamino
group, N-butyl-N-methylamino group, N-butyl-N-ethylamino group,
N-isobutylamino group, N-isobutyl-N-methylamino group, N-ethyl-N-isobutylamino
group, N-(2-ethylbutyl)amino group, N-(2-ethylbutyl)-N-methylamino group,
N-cyclopentylamino group, N-cyclopentyl-N-methylamino group, N-cyclohexylamino
group, N-cyclohexyl-N-methylamino group, N-cycloheptylamino group,
N-(cyclopentylmethyl)amino group, N-(cyclopentylmethyl)-N-methylamino group,
N-(cyclohexylmethyl)amino group, N-(cyclohexylmethyl)-N-methylamino group,
N-(2-methylphenyl)amino group, N-(4-methylphenyl)amino group,
N-(2-fluorophenyl)amino group, N-(3-fluorophenyl)amino group,
N-(4-fluorophenyl)amino group, N-(2-chlorophenyl)amino group,
N-(3-chlorophenyl)amino group, N-(4-chlorophenyl)amino group,
N-(indan-2-yl)amino group, N-(1-phenylethyl)amino group,
N-[1-(2-fluorophenyl)ethyl]amino group, N-[1-(3-fluorophenyl)ethyl]amino group,
N-[1-(4-fluorophenyl)ethyl]amino group, N-[1-(2-chlorophenyl)ethyl]amino group,
N-[1-(3-chlorophenyl)ethyl]amino group, N-[1-(4-chlorophenyl)ethyl]amino group,
N-(2-methylphenylmethyl)amino group, N-methyl-N-(2-methylphenylmethyl)amino
group, N-(3-methylphenylmethyl)amino group,
N-methyl-N-(3-methylphenylmethyl)amino group, N-(4-methylphenylmethyl)amino
group, N-methyl-N-(4-methylphenylmethyl)amino group,
N-(2-fluorophenylmethyl)amino group, N-(2-fluorophenylmethyl)-N-methylamino
group, N-(3-fluorophenylmethyl)amino group,
N-(3-fluorophenylmethyl)-N-methylamino group, N-(4-fluorophenylmethyl)amino
group, N-(4-fluorophenylmethyl)-N-methylamino group,
N-(2-chlorophenylmethyl)amino group, N-(2-chlorophenylmethyl)-N-methylamino

group, N-(3-chlorophenylmethyl)amino group,
N-(3-chlorophenylmethyl)-N-methylamino group, N-(4-chlorophenylmethyl)amino group,
N-(4-chlorophenylmethyl)-N-methylamino group,
N-(2,3-difluorophenylmethyl)amino group,
N-(2,3-difluorophenylmethyl)-N-methylamino group,
N-(2,4-difluorophenylmethyl)amino group,
N-(2,4-difluorophenylmethyl)-N-methylamino group,
N-(2,5-difluorophenylmethyl)amino group,
N-(2,5-difluorophenylmethyl)-N-methylamino group,
N-(3,4-difluorophenylmethyl)amino group,
N-(3,4-difluorophenylmethyl)-N-methylamino group,
N-(3,5-difluorophenylmethyl)amino group,
N-(3,5-difluorophenylmethyl)-N-methylamino group,
N-(2,3-dichlorophenylmethyl)amino group,
N-(2,3-dichlorophenylmethyl)-N-methylamino group,
N-(2,4-dichlorophenylmethyl)amino group,
N-(2,4-dichlorophenylmethyl)-N-methylamino group,
N-(2,5-dichlorophenylmethyl)amino group,
N-(2,5-dichlorophenylmethyl)-N-methylamino group,
N-(2,6-dichlorophenylmethyl)amino group,
N-(2,6-dichlorophenylmethyl)-N-methylamino group,
N-(3,4-dichlorophenylmethyl)amino group,
N-(3,4-dichlorophenylmethyl)-N-methylamino group,
N-(3,5-dichlorophenylmethyl)amino group,
N-(3,5-dichlorophenylmethyl)-N-methylamino group,
N-[2-(trifluoromethyl)phenylmethyl]amino group,
N-methyl-N-[2-(trifluoromethyl)phenylmethyl]amino group,

N-[3-(trifluoromethyl)phenylmethyl]amino group,
N-methyl-N-[3-(trifluoromethyl)phenylmethyl]amino group,
N-[4-(trifluoromethyl)phenylmethyl]amino group,
N-methyl-N-[4-(trifluoromethyl)phenylmethyl]amino group, 1-pyrrolidino group,
1-(4-methylpiperidino) group, 1-homopiperidino group, and 4-morpholino group.

A most preferred example of R_s in the aforementioned general formula (I) include R_s which meets the conditions of: R_s is -D-R_x wherein D is a single bond and R_x represents R_b, and A¹ and A² in R_b are single bonds. Specific examples include phenyl group, 2-methylphenyl group, 3-methylphenyl group, 4-methylphenyl group, 2,3-dimethylphenyl group, 3,5-dimethylphenyl group, 2-methoxyphenyl group, 3-methoxyphenyl group, 4-methoxyphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, 2,3-difluorophenyl group, 2,4-difluorophenyl group, 2,5-difluorophenyl group, 3,4-difluorophenyl group, 2,3-dichlorophenyl group, 2,4-dichlorophenyl group, 2,5-dichlorophenyl group, 2,6-dichlorophenyl group, 3,4-dichlorophenyl group, 3,5-dichlorophenyl group, 2-trifluoromethylphenyl group, 3-trifluoromethylphenyl group, 4-trifluoromethylphenyl group, 4-(N,N-dimethylamino)phenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, furan-2-yl group, furan-3-yl group, thiophen-2-yl group, thiophen-3-yl group, pyridin-2-yl group, pyridin-3-yl group, pyridin-4-yl group, naphthalen-1-yl group, naphthalen-2-yl group, 1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1H-indazol-5-yl group, or

1-methyl-1H-indazol-5-yl group.

AR in the formula (I) is defined to be a residue of a partially unsaturated or completely unsaturated condensed bicyclic carbon ring or heterocyclic ring (ar).

Further, AR may be substituted with one of Xa or two or more of the same or different Xa. The heterocyclic ring (ar) means a ring containing 1 to 4 the same or different ring-constituting heteroatoms selected from the group consisting of nitrogen atom, oxygen atom, and sulfur atom.

The "condensed bicyclic carbon ring or heterocyclic ring" means a partially unsaturated or completely unsaturated ring having 8 to 11 atoms. Preferred examples include a partially unsaturated or completely unsaturated ring consisting of 8 atoms formed by fusion of 5-membered heterocyclic rings containing 1 or 2 ring-constituting heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur atoms, a partially unsaturated or completely unsaturated ring consisting of 9 atoms formed by fusion of a 5-membered heterocyclic ring containing 1 or 2 ring-constituting heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur atoms and a 6-membered carbon ring or a 6-membered heterocyclic ring containing 1 or 2 ring-constituting heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur atoms, and a partially unsaturated or completely unsaturated substituent consisting of 10 atoms formed by fusion of a 6-membered carbon ring or a 6-membered heterocyclic ring containing 1 or 2 ring-constituting heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur atoms and a 6-membered carbon ring or 6-membered heterocyclic rings containing 1 or 2 ring-constituting heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur atom. As the carbon ring constituting AR not containing a heteroatom, among the rings constituting AR, naphthalene ring is particularly preferred. Further, as the heterocyclic ring (ar) containing a heteroatom, among the rings constituting AR, those containing 1 or 2 ring-constituting heteroatoms are

preferred.

As for AR in the formula (I), specific examples of preferred ring constituting AR include naphthalene, benzofuran, benzo[b]thiophene, indole, benzothiazole, dihydro-3H-benzothiazole, quinoline, dihydro-1H-quinoline, benzo[d]isothiazole, 1H-indazole, benzo[cl]isothiazole, 2H-indazole, imidazo[1,2-a]pyridine, 1H-pyrrolo[2,3-b]pyridine, isoquinoline, dihydro-2H-isoquinoline, cinnoline, quinazoline, quinoxaline, 1H-benzimidazole, benzoxazole, 1H-pyrrolo[3,2-b]pyridine, benzo[1,2,5]thiadiazole, 1H-benzotriazole, 1,3-dihydropyrrolo[2,3-b]pyridine, 1,3-dihydrobenzimidazole, dihydro-3H-benzoxazole, phthalazine, [1,8]naphthalidine, [1,5]naphthalidine, 1H-pyrrolo[3,2-c]pyridine, 1H-pyrrolo[2,3-c]pyridine, 1H-pyrazolo[4,3-b]pyridine, 1H-pyrazolo[4,3-c]pyridine, 1H-pyrazolo[3,4-c]pyridine, 1H-pyrazolo[3,4-b]pyridine, [1,2,4]triazolo[4,3-a]pyridine, thiено[3,2-c]pyridine, thiено[3,2-b]pyridine, 1H-thieno[3,2-c]pyrazole, benzo[d]isoxazole, benzo[c]isoxazole, indolizine, 1,3-dihydroindol, 1H-pyrazolo[3,4-d]thiazole, 2H-isoindol, [1,2,4]triazolo[1,5-a]pyrimidine, 1H-pyrazolo[3,4-b]pyrazine, 1H-imidazo[4,5-b]pyrazine, 7H-purine, 4H-chromene, and the like. Among them, naphthalene, benzofuran, benzo[b]thiophene, indole, benzothiazole, dihydro-3H-benzothiazole, quinoline, dihydro-1H-quinoline, benzo[d]isothiazole, 1H-indazole, benzo[cl]isothiazole, 2H-indazole, imidazo[1,2-a]pyridine, 1H-pyrrolo[2,3-b]pyridine, isoquinoline and dihydro-2H-isoquinoline constitute a particularly preferred group, and cinnoline, quinazoline, quinoxaline, 1H-benzimidazole, benzoxazole, 1H-pyrrolo[3,2-b]pyridine, benzo[1,2,5]thiadiazole, 1H-benzotriazole, 1,3-dihydropyrrolo[2,3-b]pyridine, 1,3-dihydrobenzimidazole and dihydro-3H-benzoxazole also constitute a particularly preferred group. Further, naphthalene, benzofuran, benzo[b]thiophene, indole, benzothiazole, quinoline, 1H-indazole and isoquinoline are particularly preferred.

AR binds to any of the ring-constituting carbon atoms C², C³, C⁴, C⁵, and C⁶

in the aromatic ring (E) in the aforementioned formula (I) at an arbitrary carbon atom in AR. Preferred examples of the ring constituting AR include, as indicated with substitution position in the aromatic ring (E), naphthalen-2-yl group, naphthalen-1-yl group, benzofuran-5-yl group, benzofuran-4-yl group, benzofuran-2-yl group, benzo[b]thiophen-5-yl group, benzo[b]thiophen-4-yl group, benzo[b]thiophen-2-yl group, indol-5-yl group, indol-4-yl group, indol-6-yl group, benzothiazol-6-yl group, benzothiazol-7-yl group, benzothiazol-5-yl group, benzothiazol-4-yl group, dihydro-3H-benzothiazol-6-yl group, dihydro-3H-benzothiazol-7-yl group, dihydro-3H-benzothiazol-5-yl group, dihydro-3H-benzothiazol-4-yl group, quinolin-6-yl group, quinolin-3-yl group, quinolin-5-yl group, quinolin-7-yl group, dihydro-1H-quinolin-6-yl group, dihydro-1H-quinolin-5-yl group, benzo[d]isothiazol-5-yl group, benzo[d]isothiazol-4-yl group, benzo[d]isothiazol-6-yl group, benzo[d]isothiazol-7-yl group, 1H-indazol-5-yl group, 1H-indazol-4-yl group, 1H-indazol-6-yl group, benzo[c]isothiazol-5-yl group, benzo[c]isothiazol-4-yl group, benzo[c]isothiazol-6-yl group, benzo[c]isothiazol-7-yl group, 2H-indazol-5-yl group, 2H-indazol-4-yl group, 2H-indazol-6-yl group, imidazo[1,2-a]pyridin-6-yl group, imidazo[1,2-a]pyridin-7-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1H-pyrrolo[2,3-b]pyridin-4-yl group, isoquinolin-6-yl group, isoquinolin-3-yl group, isoquinolin-5-yl group, isoquinolin-7-yl group, dihydro-2H-isoquinolin-6-yl group, dihydro-2H-isoquinolin-5-yl group, cinnolin-6-yl group, cinnolin-5-yl group, quinazolin-6-yl group, quinazolin-7-yl group, quinazolin-5-yl group, quinoxalin-2-yl group, quinoxalin-6-yl group, quinoxalin-5-yl group, 1H-benzimidazol-5-yl group, 1H-benzimidazol-4-yl group, benzoxazol-5-yl group, benzoxazol-6-yl group, benzoxazol-4-yl group, benzoxazol-7-yl group, 1H-pyrrolo[3,2-b]pyridin-5-yl group, 1H-pyrrolo[3,2-b]pyridin-6-yl group, benzo[1,2,5]thiadiazol-5-yl group, benzo[1,2,5]thiadiazol-4-yl group, 1H-benzotriazol-5-yl group, 1H-benzotriazol-4-yl

group, 1,3-dihydropyrrolo[2,3-b]pyridin-5-yl group,
1,3-dihydropyrrolo[2,3-b]pyridin-4-yl group, 1,3-dihydrobenzimidazol-5-yl group,
1,3-dihydrobenzimidazol-4-yl group, dihydro-3H-benzoxazol-6-yl group,
dihydro-3H-benzoxazol-7-yl group, dihydro-3H-benzoxazol-5-yl group,
dihydro-3H-benzoxazol-4-yl group, phthalazin-6-yl group, phthalazin-5-yl group,
[1,8]naphthalidin-3-yl group, [1,8]naphthalidin-4-yl group, [1,5]naphthalidin-3-yl
group, [1,5]naphthalidin-4-yl group, 1H-pyrrolo[3,2-c]pyridin-6-yl group,
1H-pyrrolo[3,2-c]pyridin-4-yl group, 1H-pyrrolo[2,3-c]pyridin-5-yl group,
1H-pyrrolo[2,3-c]pyridin-4-yl group, 1H-pyrazolo[4,3-b]pyridin-5-yl group,
1H-pyrazolo[4,3-b]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-6-yl group,
1H-pyrazolo[4,3-c]pyridin-4-yl group, 1H-pyrazolo[3,4-c]pyridin-5-yl group,
1H-pyrazolo[3,4-c]pyridin-4-yl group, 1H-pyrazolo[3,4-b]pyridin-5-yl group,
1H-pyrazolo[3,4-b]pyridin-4-yl group, [1,2,4]triazolo[4,3-a]pyridin-6-yl group,
[1,2,4]triazolo[4,3-a]pyridin-7-yl group, thieno[3,2-c]pyridin-2-yl group,
thieno[3,2-c]pyridin-3-yl group, thieno[3,2-c]pyridin-6-yl group,
thieno[3,2-b]pyridin-2-yl group, thieno[3,2-b]pyridin-3-yl group,
thieno[3,2-b]pyridin-5-yl group, thieno[3,2-b]pyridin-6-yl group,
1H-thieno[3,2-c]pyrazol-5-yl group, 1H-thieno[3,2-c]pyrazol-4-yl group,
benzo[d]isoxazol-5-yl group, benzo[d]isoxazol-4-yl group, benzo[d]isoxazol-6-yl group,
benzo[d]isoxazol-7-yl group, benzo[c]isoxazol-5-yl group, benzo[c]isoxazol-4-yl group,
benzo[c]isoxazol-6-yl group, benzo[c]isoxazol-7-yl group, indolizin-7-yl group,
indolizin-6-yl group, indolizine-8-yl group, 1,3-dihydroindol-5-yl group,
1,3-dihydroindol-4-yl group, 1,3-dihydroindol-6-yl group,
1H-pyrazolo[3,4-d]thiazol-5-yl group, 2H-isoindol-5-yl group, 2H-isoindol-4-yl group,
[1,2,4]triazolo[1,5-a]pyrimidin-6-yl group, 1H-pyrazolo[3,4-b]pyrazin-5-yl group,
1H-imidazo[4,5-b]pyrazin-5-yl group, 7H-purin-2-yl group, 4H-chromen-6-yl group,
4H-chromen-5-yl group, and the like. Among them, naphthalen-2-yl group,

naphthalen-1-yl group, benzofuran-5-yl group, benzofuran-4-yl group, benzo[b]thiophen-5-yl group, benzo[b]thiophen-4-yl group, indol-5-yl group, indol-4-yl group, benzothiazol-6-yl group, benzothiazol-7-yl group, quinolin-6-yl group, quinolin-3-yl group, dihydro-1H-quinolin-6-yl group, benzo[d]isothiazol-5-yl group, 1H-indazol-5-yl group, 1H-indazol-4-yl group, imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, dihydro-2H-isoquinolin-6-yl group, cinnolin-6-yl group, benzoxazol-5-yl group, and the like constitute a particularly preferred group, and naphthalen-2-yl group, benzofuran-5-yl group, benzo[b]thiophen-5-yl group, indol-5-yl group, benzothiazol-6-yl group, quinolin-6-yl group, quinolin-3-yl group, benzo[d]isothiazol-5-yl group, 1H-indazol-5-yl group, imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, cinnolin-6-yl group, benzoxazol-5-yl group and the like are particularly preferred.

Further, AR may be substituted with one of Xa or the same or different two or more of Xa. Examples of substitution position of Xa include a carbon atom of AR not bonding to the aromatic ring (E), and/or when nitrogen atom is present, that nitrogen atom.

The substituent Xa represents a linear or branched saturated alkyl group having 1 to 4 carbon atoms, a saturated cyclic alkyl group having 3 to 7 carbon atoms, oxo group, thioxo group, fluorine atom, chlorine atom, trifluoromethyl group, $\cdot(\text{CH}_2)_i\text{R}^{14}$, $\cdot\text{OR}^{10}$, $\cdot\text{N}(\text{R}^{11})(\text{R}^{12})$, $\cdot\text{SO}_2\text{R}^{13}$, or $\cdot\text{COR}^{27}$. However, when nitrogen atom is present in AR, Xa which may substitute on the nitrogen atom represents a linear or branched saturated alkyl group having 1 to 4 carbon atoms, a saturated cyclic alkyl group having 3 to 7 carbon atoms, or $\cdot(\text{CH}_2)_i\text{R}^{14}$.

Preferred examples of the substituent Xa are oxo group, thioxo group, fluorine atom, chlorine atom, and trifluoromethyl group.

Examples of the linear or branched saturated alkyl group having 1 to 4

carbon atoms as the substituent X_a include methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, and the like, and among them, methyl group, ethyl group, and propyl group are particularly preferred.

Further, examples of the saturated cyclic alkyl group having 3 to 7 carbon atoms include cyclopropyl group, cyclobutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, and the like.

-(CH₂)_nR¹⁴ has the same meaning as defined above. Preferred examples are 2-hydroxyethyl group, carboxymethyl group, 2-carboxyethyl group, and N,N-dimethylcarbamoylmethyl group, and a particularly preferred example is 2-hydroxyethyl group.

R¹⁰ in -OR¹⁰ represents hydrogen atom, a lower alkyl group having 1 to 4 carbon atoms, or a -(CH₂)_nR¹⁴ group, and among them, hydrogen atom is a particularly preferred example. Examples of the lower alkyl group having 1 to 4 carbon atoms include methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, and the like. Among them, methyl group is particularly preferred. -(CH₂)_nR¹⁴ has the same meaning as defined above. Therefore, preferred examples of -OR¹⁰ are hydroxyl group, methoxy group, 2-hydroxyethoxy group, carboxymethoxy group, 2-carboxyethoxy group, N,N-dimethylcarbamoylmethoxy group, and the like, and hydroxyl group, methoxy group, and 2-hydroxyethoxy group are particularly preferred.

R¹¹ in -N(R¹¹)(R¹²) represents hydrogen atom, or a lower alkyl group having 1 to 4 carbon atoms, and R¹² represents hydrogen atom, a lower alkyl group having 1 to 4 carbon atoms, a hydroxalkyl group having 2 to 4 carbon atoms, -COR¹⁵, or -SO₂R¹⁶, or binds to R¹¹ to form a 3- to 6-membered ring together with the nitrogen atom to which they bind to form a saturated nitrogen-containing cycloalkyl group or morpholino group. R¹⁵ in -COR¹⁵ represents a lower alkyl group having 1 to 4 carbon atoms, a hydroxalkyl group having 2 to 4 carbon atoms, amino group, a

mono- or dialkylamino group having 1 to 4 carbon atoms, or $\text{-A}^6\text{-Qa}$. R^{16} in $\text{-SO}_2\text{R}^{16}$ represents a lower alkyl group having 1 to 4 carbon atoms, amino group, or a mono- or dialkylamino group having 1 to 4 carbon atoms. Specific examples of $\text{-N}(\text{R}^{11})(\text{R}^{12})$ include amino group, N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino group, N,N-dimethylamino group, N,N-diethylamino group, piperidino group, pyrrolidino group, morpholino group, 2-hydroxyethylamino group, formylamino group, acetylamino group, benzoyl group, furan-2-carboxyamino group, 2-hydroxyacetylamino group, 2-aminoacetylamino group, carbamoylamino group, N-methylcarbamoylamino group, N,N-dimethylcarbamoylamino group, methylsulfonylamino group, sulfamoylamino group, N-methylsulfamoylamino group, N,N-dimethylsulfamoylamino group, and the like. Among them, preferred examples are amino group, methylamino group, dimethylamino group, 2-hydroxyethylamino group, carbamoylamino group, acetylamino group, furan-2-carboxyamino group, 2-hydroxyacetylamino group, 2-aminoacetylamino group, methylsulfonylamino group, (N,N-dimethylsulfamoyl)amino group, and the like, and amino group, N-methylamino group, N,N-dimethylamino group, and 2-hydroxyethylamino group are particularly preferred.

R^{18} in $\text{-SO}_2\text{R}^{18}$ represents a lower alkyl group having 1 to 4 carbon atoms, amino group, or a mono- or dialkylamino group having 1 to 4 carbon atoms. Preferred examples of $\text{-SO}_2\text{R}^{18}$ include methanesulfonyl group, sulfamoyl group, N-methylsulfamoyl group, N,N-dimethylsulfamoyl group, and the like.

R^{27} in -COR^{27} represents hydrogen atom, hydroxyl group, an alkoxy group having 1 to 4 carbon atoms, a lower alkyl group having 1 to 4 carbon atoms, amino group, or a mono- or dialkylamino group having 1 to 4 carbon atoms. Specific examples of -COR^{27} include formyl group, carboxyl group, methoxycarbonyl group, ethoxycarbonyl group, acetyl group, propionyl group, carbamoyl group, N-methylcarbamoyl group, N,N-dimethylcarbamoyl group, and the like. Carboxyl

group, acetyl group, carbamoyl group, N,N-dimethylcarbamoyl group, and the like are preferred examples, and carboxyl group is particularly preferred.

Preferred examples of the group Xa include oxo group, thioxo group, fluorine atom, chlorine atom, trifluoromethyl group, methyl group, ethyl group, propyl group, 2-hydroxyethyl group, carboxymethyl group, 2-carboxyethyl group, N,N-dimethylcarbamoylmethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, carboxymethoxy group, 2-carboxyethoxy group, N,N-dimethylcarbamoylmethoxy group, amino group, methylamino group, dimethylamino group, 2-hydroxyethylamino group, carbamoylamino group, acetylamino group, furan-2-carboxyamino group, 2-hydroxyacetylamino group, 2-aminoacetylamino group, methylsulfonylamino group, (N,N-dimethylsulfamoyl)amino group, methanesulfonyl group, sulfamoyl group, N-methylsulfamoyl group, N,N-dimethylsulfamoyl group, carboxyl group, acetyl group, carbamoyl group, N,N-dimethylcarbamoyl group, and the like. Particularly preferred examples of the group Xa include oxo group, methyl group, ethyl group, propyl group, 2-hydroxyethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, amino group, N-methylamino group, N,N-dimethylamino group, 2-hydroxyethylamino group, carboxyl group, and the like. Preferred examples of the group Xa which may substitute on nitrogen atom include methyl group, ethyl group, propyl group, hydroxymethyl group, 2-hydroxyethyl group, carboxymethyl group, 2-carboxyethyl group, and N,N-dimethylcarbamoylmethyl group. Among them, particularly preferred examples are methyl group, ethyl group, propyl group, and 2-hydroxyethyl group.

Preferred examples of AR substituted with the group Xa or unsubstituted AR include naphthalen-1-yl group, naphthalen-2-yl group, 6-fluoronaphthalen-2-yl group, 6-chloronaphthalen-2-yl group, 6-(trifluoromethyl)naphthalen-2-yl group, 5-hydroxynaphthalen-1-yl group, 5-hydroxynaphthalen-2-yl group,

6-hydroxynaphthalen-1-yl group, 6-hydroxynaphthalen-2-yl group,
7-hydroxynaphthalen-1-yl group, 7-hydroxynaphthalen-2-yl group,
5-methoxynaphthalen-1-yl group, 5-methoxynaphthalen-2-yl group,
6-methoxynaphthalen-1-yl group, 6-methoxynaphthalen-2-yl group,
7-methoxynaphthalen-1-yl group, 7-methoxynaphthalen-2-yl group,
5-(2-hydroxyethoxy)naphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl
group, 7-(2-hydroxyethoxy)naphthalen-2-yl group,
5-(carboxymethoxy)naphthalen-2-yl group, 6-(carboxymethoxy)naphthalen-2-yl
group, 7-(carboxymethoxy)naphthalen-2-yl group,
5-(N,N-dimethylcarbamoylmethoxy)naphthalen-2-yl group,
6-(N,N-dimethylcarbamoylmethoxy)naphthalen-2-yl group,
7-(N,N-dimethylcarbamoylmethoxy)naphthalen-2-yl group,
5-aminonaphthalen-1-yl group, 5-aminonaphthalen-2-yl group,
6-aminonaphthalen-1-yl group, 6-aminonaphthalen-2-yl group,
7-aminonaphthalen-1-yl group, 7-aminonaphthalen-2-yl group,
5-(N-methylamino)naphthalen-1-yl group, 5-(N-methylamino)naphthalen-2-yl group,
6-(N-methylamino)naphthalen-1-yl group, 6-(N-methylamino)naphthalen-2-yl group,
7-(N-methylamino)naphthalen-1-yl group, 7-(N-methylamino)naphthalen-2-yl group,
5-(N,N-dimethylamino)naphthalen-1-yl group,
5-(N,N-dimethylamino)naphthalen-2-yl group,
6-(N,N-dimethylamino)naphthalen-1-yl group,
6-(N,N-dimethylamino)naphthalen-2-yl group,
7-(N,N-dimethylamino)naphthalen-1-yl group,
7-(N,N-dimethylamino)naphthalen-2-yl group,
5-(2-hydroxyethylamino)naphthalen-2-yl group,
6-(2-hydroxyethylamino)naphthalen-2-yl group,
7-(2-hydroxyethylamino)naphthalen-2-yl group, 5-acetylaminonaphthalen-2-yl

group, 6-acetylaminonaphthalen-2-yl group, 6-(2-aminoacetylamino)naphthalen-2-yl group, 6-(2-hydroxyacetylamino)naphthalen-2-yl group, 7-(2-hydroxyacetylamino)naphthalen-2-yl group, 6-[(furan-2-carbonyl)aminolnaphthalen-2-yl group, 7-[(furan-2-carbonyl)amino]naphthalen-2-yl group, 6-[(benzene-2-carbonyl)amino]naphthalen-2-yl group, 7-[(benzene-2-carbonyl)amino]naphthalen-2-yl group, 6-carbamoylaminonaphthalen-2-yl group, 6-methylsulfonylaminonaphthalen-2-yl group, 6-sulfamoylaminonaphthalen-2-yl group, 6-(N,N-dimethylsulfamoylamino)naphthalen-2-yl group, 6-methanesulfonylnaphthalen-2-yl group, 6-sulfamoylnaphthalen-2-yl group, 6-(N-methylsulfamoyl)naphthalen-2-yl group, 6-(N,N-dimethylsulfamoyl)naphthalen-2-yl group, 6-carboxynaphthalen-2-yl group, benzo[b]furan-4-yl group, benzo[b]furan-5-yl group, 2-methylbenzo[b]furan-4-yl group, 2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-4-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-4-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, 2-carboxybenzo[b]furan-4-yl group, 2-carboxybenzo[b]furan-5-yl group, 2-carboxy-3-methylbenzo[b]furan-4-yl group, 2-carboxy-3-methylbenzo[b]furan-5-yl group, 3-acetylbenzo[b]furan-4-yl group, 3-acetyl-2-methylbenzo[b]furan-4-yl group, 3-acetyl-2-methylbenzo[b]furan-5-yl group, 3-hydroxymethylbenzo[b]furan-4-yl group, 3-hydroxymethylbenzo[b]furan-5-yl group, 3-hydroxymethyl-2-methylbenzo[b]furan-4-yl group, 3-hydroxymethyl-2-methylbenzo[b]furan-5-yl group, benzo[b]thiophen-4-yl group, benzo[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-4-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-4-yl group, 3-methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-4-yl group,

2,3-dimethylbenzo[b]thiophen-5-yl group, 2-carboxybenzo[b]thiophen-4-yl group,
2-carboxybenzo[b]thiophen-5-yl group, 2-carboxy-3-methylbenzo[b]thiophen-4-yl
group, 2-carboxy-3-methylbenzo[b]thiophen-5-yl group,
3-acetylbenzo[b]thiophen-4-yl group, 3-acetylbenzo[b]thiophen-5-yl group,
3-acetyl-2-methylbenzo[b]thiophen-4-yl group,
3-acetyl-2-methylbenzo[b]thiophen-5-yl group,
3-hydroxymethylbenzo[b]thiophen-4-yl group,
3-hydroxymethylbenzo[b]thiophen-5-yl group,
3-hydroxymethyl-2-methylbenzo[b]thiophen-4-yl group,
3-hydroxymethyl-2-methylbenzo[b]thiophen-5-yl group, 1H-indol-4-yl group,
1H-indol-5-yl group, 2-methyl-1H-indol-4-yl group, 2-methyl-1H-indol-5-yl group,
3-methyl-1H-indol-4-yl group, 3-methyl-1H-indol-5-yl group,
2,3-dimethyl-1H-indol-4-yl group, 2,3-dimethyl-1H-indol-5-yl group,
2-carboxy-1H-indol-4-yl group, 2-carboxy-1H-indol-5-yl group,
2-carboxy-3-methyl-1H-indol-4-yl group, 2-carboxy-3-methyl-1H-indol-5-yl group,
3-acetyl-1H-indol-4-yl group, 3-acetyl-1H-indol-5-yl group,
3-acetyl-2-methyl-1H-indol-4-yl group, 3-acetyl-2-methyl-1H-indol-5-yl group,
3-hydroxymethyl-1H-indol-4-yl group, 3-hydroxymethyl-1H-indol-5-yl group,
3-hydroxymethyl-2-methyl-1H-indol-4-yl group,
3-hydroxymethyl-2-methyl-1H-indol-5-yl group, 1-methyl-1H-indol-4-yl group,
1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-4-yl group,
1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-4-yl group,
1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-4-yl group,
1,2,3-trimethyl-1H-indol-5-yl group, 2-carboxy-1-methyl-1H-indol-4-yl group,
2-carboxy-1-methyl-1H-indol-5-yl group, 2-carboxy-1,3-dimethyl-1H-indol-4-yl group,
2-carboxy-1,3-dimethyl-1H-indol-5-yl group, 3-acetyl-1-methyl-1H-indol-4-yl group,
3-acetyl-1-methyl-1H-indol-5-yl group, 3-acetyl-1,2-dimethyl-1H-indol-4-yl group,

3-acetyl-1,2-dimethyl-1H-indol-5-yl group, 3-hydroxymethyl-1-methyl-1H-indol-4-yl group, 3-hydroxymethyl-1-methyl-1H-indol-5-yl group, 3-hydroxymethyl-1,2-dimethyl-1H-indol-4-yl group, 3-hydroxymethyl-1,2-dimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-4-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-4-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-4-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 2-carboxy-1-ethyl-1H-indol-4-yl group, 2-carboxy-1-ethyl-1H-indol-5-yl group, 2-carboxy-1-ethyl-3-methyl-1H-indol-4-yl group, 2-carboxy-1-ethyl-3-methyl-1H-indol-5-yl group, 3-acetyl-1-ethyl-1H-indol-4-yl group, 3-acetyl-1-ethyl-1H-indol-5-yl group, 3-acetyl-1-ethyl-2-methyl-1H-indol-4-yl group, 3-acetyl-1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-hydroxymethyl-1H-indol-4-yl group, 1-ethyl-3-hydroxymethyl-1H-indol-5-yl group, 1-ethyl-3-hydroxymethyl-2-methyl-1H-indol-4-yl group, 1-ethyl-3-hydroxymethyl-2-methyl-1H-indol-5-yl group, 1-propyl-1H-indol-4-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-4-yl group, 3-methyl-1-propyl-1H-indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-4-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 2-carboxy-1-propyl-1H-indol-4-yl group, 2-carboxy-1-propyl-1H-indol-5-yl group, 2-carboxy-3-methyl-1-propyl-1H-indol-4-yl group, 2-carboxy-3-methyl-1-propyl-1H-indol-5-yl group, 3-acetyl-1-propyl-1H-indol-4-yl group, 3-acetyl-1-propyl-1H-indol-5-yl group, 3-acetyl-2-methyl-1-propyl-1H-indol-4-yl group, 3-acetyl-2-methyl-1-propyl-1H-indol-5-yl group, 3-hydroxymethyl-1-propyl-1H-indol-4-yl group,

3-hydroxymethyl-1-propyl-1H-indol-5-yl group,
3-hydroxymethyl-2-methyl-1-propyl-1H-indol-4-yl group,
3-hydroxymethyl-2-methyl-1-propyl-1H-indol-5-yl group,
1-(2-hydroxyethyl)-1H-indol-4-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group,
1-(2-hydroxyethyl)-2-methyl-1H-indol-4-yl group,
1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group,
1-(2-hydroxyethyl)-3-methyl-1H-indol-4-yl group,
1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group,
2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-4-yl group,
2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group,
2-carboxy-1-(2-hydroxyethyl)-1H-indol-4-yl group,
2-carboxy-1-(2-hydroxyethyl)-1H-indol-5-yl group,
2-carboxy-1-(2-hydroxyethyl)-3-methyl-1H-indol-4-yl group,
2-carboxy-1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group,
3-acetyl-1-(2-hydroxyethyl)-1H-indol-4-yl group,
3-acetyl-1-(2-hydroxyethyl)-1H-indol-5-yl group,
3-acetyl-1-(2-hydroxyethyl)-2-methyl-1H-indol-4-yl group,
3-acetyl-1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group,
1-(2-hydroxyethyl)-3-hydroxymethyl-1H-indol-4-yl group,
1-(2-hydroxyethyl)-3-hydroxymethyl-1H-indol-5-yl group,
1-(2-hydroxyethyl)-3-hydroxymethyl-2-methyl-1H-indol-4-yl group,
1-(2-hydroxyethyl)-3-hydroxymethyl-2-methyl-1H-indol-5-yl group,
1-carboxymethyl-1H-indol-4-yl group, 1-carboxymethyl-1H-indol-5-yl group,
1-carboxymethyl-2-methyl-1H-indol-4-yl group,
1-carboxymethyl-2-methyl-1H-indol-5-yl group,
1-carboxymethyl-3-methyl-1H-indol-4-yl group,
1-carboxymethyl-3-methyl-1H-indol-5-yl group,

1-carboxymethyl-2,3-dimethyl-1H-indol-4-yl group,
1-carboxymethyl-2,3-dimethyl-1H-indol-5-yl group,
2-carboxy-1-carboxymethyl-1H-indol-4-yl group,
2-carboxy-1-carboxymethyl-1H-indol-5-yl group,
2-carboxy-1-carboxymethyl-3-methyl-1H-indol-4-yl group,
2-carboxy-1-carboxymethyl-3-methyl-1H-indol-5-yl group,
3-acetyl-1-carboxymethyl-1H-indol-4-yl group,
3-acetyl-1-carboxymethyl-1H-indol-5-yl group,
3-acetyl-1-carboxymethyl-2-methyl-1H-indol-4-yl group,
3-acetyl-1-carboxymethyl-2-methyl-1H-indol-5-yl group,
1-carboxymethyl-3-hydroxymethyl-1H-indol-4-yl group,
1-carboxymethyl-3-hydroxymethyl-1H-indol-5-yl group,
1-carboxymethyl-3-hydroxymethyl-2-methyl-1H-indol-4-yl group,
1-carboxymethyl-3-hydroxymethyl-2-methyl-1H-indol-5-yl group, benzothiazol-6-yl group, 2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group,
2-aminobenzothiazol-6-yl group, 2-(N-methylamino)benzothiazol-6-yl group,
2-(N,N-dimethylamino)benzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group, 2-oxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group,
2-thioxo-2,3-dihydrobenzothiazol-6-yl group,
2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group,
2-methylquinolin-3-yl group, quinolin-6-yl group, 2-methylquinolin-6-yl group,
2-oxo-1,2-dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl group,
3-methylbenzo[d]isothiazol-5-yl group, 1H-indazol-5-yl group,
3-methyl-1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group,
1,3-dimethyl-1H-indazol-5-yl group, 1-ethyl-1H-indazol-5-yl group,
1-ethyl-3-methyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group,
3-methyl-1-propyl-1H-indazol-5-yl group, 1-(2-hydroxyethyl)-1H-indazol-5-yl group,

1-(2-hydroxyethyl)-3-methyl-1H-indazol-5-yl group,
1-(carboxymethyl)-1H-indazol-5-yl group,
1-(carboxymethyl)-3-methyl-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group,
3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group,
benzo[c]isothiazol-5-yl group, 3-methylbenzo[c]isothiazol-5-yl group,
2-methyl-2H-indazol-5-yl group, 2,3-dimethyl-2H-indazol-5-yl group,
2-ethyl-2H-indazol-5-yl group, 2-ethyl-3-methyl-2H-indazol-5-yl group,
2-propyl-2H-indazol-5-yl group, 3-methyl-2-propyl-2H-indazol-5-yl group,
2-(2-hydroxyethyl)-2H-indazol-5-yl group,
2-(2-hydroxyethyl)-3-methyl-2H-indazol-5-yl group,
2-(carboxymethyl)-2H-indazol-5-yl group,
2-(carboxymethyl)-3-methyl-2H-indazol-5-yl group, imidazo[1,2-a]pyridin-6-yl group,
2-methyl-imidazo[1,2-a]pyridin-6-yl group, 3-methyl-imidazo[1,2-a]pyridin-6-yl
group, 2,3-dimethyl-imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl
group, 2-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group,
3-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group,
1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group,
1,2-dimethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group,
1,3-dimethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group,
2,3-dimethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group,
1,2,3-trimethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group,
1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group,
1-ethyl-2-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group,
1-ethyl-3-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group,
1-ethyl-2,3-dimethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group,
1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group,
2-methyl-1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group,

3-methyl-1-propyl-1*H*-pyrrolo[2,3-*b*]pyridin-5-yl group,
2,3-dimethyl-1-propyl-1*H*-pyrrolo[2,3-*b*]pyridin-5-yl group,
1-(2-hydroxyethyl)-1*H*-pyrrolo[2,3-*b*]pyridin-5-yl group,
1-(2-hydroxyethyl)-2-methyl-1*H*-pyrrolo[2,3-*b*]pyridin-5-yl group,
1-(2-hydroxyethyl)-3-methyl-1*H*-pyrrolo[2,3-*b*]pyridin-5-yl group,
2,3-dimethyl-1-(2-hydroxyethyl)-1*H*-pyrrolo[2,3-*b*]pyridin-5-yl group,
1-(carboxymethyl)-1*H*-pyrrolo[2,3-*b*]pyridin-5-yl group,
1-(carboxymethyl)-2-methyl-1*H*-pyrrolo[2,3-*b*]pyridin-5-yl group,
1-(carboxymethyl)-3-methyl-1*H*-pyrrolo[2,3-*b*]pyridin-5-yl group,
1-(carboxymethyl)-2,3-dimethyl-1*H*-pyrrolo[2,3-*b*]pyridin-5-yl group,
isoquinolin-6-yl group, 1-methylisoquinolin-6-yl group,
1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, cinnolin-5-yl group,
quinazolin-6-yl group, quinazolin-7-yl group, quinazolin-5-yl group,
2-methylquinazolin-6-yl group, quinoxalin-6-yl group, quinoxalin-5-yl group,
2-methylquinoxalin-6-yl group, 1*H*-benzimidazol-5-yl group, 1*H*-benzimidazol-4-yl
group, 1-methyl-1*H*-benzimidazol-5-yl group, 2-methyl-1*H*-benzimidazol-5-yl group,
1,2-dimethyl-1*H*-benzimidazol-5-yl group, benzoxazol-5-yl group, benzoxazol-6-yl
group, benzoxazol-4-yl group, benzoxazol-7-yl group, 2-methylbenzoxazol-5-yl group,
1*H*-pyrrolo[3,2-*b*]pyridin-5-yl group, 1*H*-pyrrolo[3,2-*b*]pyridin-6-yl group,
1-methyl-1*H*-pyrrolo[3,2-*b*]pyridin-5-yl group, 1-ethyl-1*H*-pyrrolo[3,2-*b*]pyridin-5-yl
group, 2-methyl-1*H*-pyrrolo[3,2-*b*]pyridin-5-yl group,
3-methyl-1*H*-pyrrolo[3,2-*b*]pyridin-5-yl group,
1,3-dimethyl-1*H*-pyrrolo[3,2-*b*]pyridin-5-yl group, benzo[1,2,5]thiadiazol-5-yl group,
benzo[1,2,5]thiadiazol-4-yl group, 1*H*-benzotriazol-5-yl group, 1*H*-benzotriazol-4-yl
group, 1-methyl-1*H*-benzotriazol-5-yl group, 1-ethyl-1*H*-benzotriazol-5-yl group,
1,3-dihydropyrrolo[2,3-*b*]pyridin-2-on-5-yl group,
1,3-dihydropyrrolo[2,3-*b*]pyridin-2-on-4-yl group,

1-methyl-1,3-dihydrodropyrrolo[2,3-b]pyridin-2-on-5-yl group,
1,3-dihydrobenzimidazol-2-on-5-yl group, 1,3-dihydrobenzimidazol-2-on-4-yl group,
1-methyl-1,3-dihydrobenzimidazol-2-on-5-yl group,
1,3-dihydrobenzimidazole-2-thion-5-yl group, 1,3-dihydrobenzimidazole-2-thion-4-yl
group, 1-methyl-1,3-dihydrobenzimidazole-2-thion-5-yl group,
3H-benzoxazol-2-on-6-yl group, 3H-benzoxazol-2-on-7-yl group,
3H-benzoxazol-2-on-5-yl group, 3H-benzoxazol-2-on-4-yl group,
3-methyl-3H-benzoxazol-2-on-6-yl group, 3H-benzoxazole-2-thion-6-yl group,
3H-benzoxazole-2-thion-7-yl group, 3H-benzoxazole-2-thion-5-yl group,
3H-benzoxazole-2-thion-4-yl group, 3-methyl-3H-benzoxazole-2-thion-6-yl group,
phthalazin-6-yl group, phthalazin-5-yl group, [1,8]naphthalidin-3-yl group,
[1,8]naphthalidin-4-yl group, [1,5]naphthalidin-3-yl group, [1,5]naphthalidin-4-yl
group, 1H-pyrrolo[3,2-c]pyridin-6-yl group, 1H-pyrrolo[3,2-c]pyridin-4-yl group,
1-methyl-1H-pyrrolo[3,2-c]pyridin-6-yl group, 1-ethyl-1H-pyrrolo[3,2-c]pyridin-6-yl
group, 2-methyl-1H-pyrrolo[3,2-c]pyridin-6-yl group,
3-methyl-1H-pyrrolo[3,2-c]pyridin-6-yl group,
1,3-dimethyl-1H-pyrrolo[3,2-c]pyridin-6-yl group, 1H-pyrrolo[2,3-c]pyridin-5-yl
group, 1H-pyrrolo[2,3-c]pyridin-4-yl group, 1-methyl-1H-pyrrolo[2,3-c]pyridin-5-yl
group, 1-ethyl-1H-pyrrolo[2,3-c]pyridin-5-yl group,
2-methyl-1H-pyrrolo[2,3-c]pyridin-5-yl group,
3-methyl-1H-pyrrolo[2,3-c]pyridin-5-yl group,
1,3-dimethyl-1H-pyrrolo[2,3-c]pyridin-5-yl group, 1H-pyrazolo[4,3-b]pyridin-5-yl
group, 1H-pyrazolo[4,3-b]pyridin-6-yl group,
1-methyl-1H-pyrazolo[4,3-b]pyridin-5-yl group,
1-ethyl-1H-pyrazolo[4,3-b]pyridin-5-yl group,
3-methyl-1H-pyrazolo[4,3-b]pyridin-5-yl group,
1,3-dimethyl-1H-pyrazolo[4,3-b]pyridin-5-yl group, 1H-pyrazolo[4,3-c]pyridin-6-yl

group, 1H-pyrazolo[4,3-c]pyridin-4-yl group,
1-methyl-1H-pyrazolo[4,3-c]pyridin-6-yl group,
1-ethyl-1H-pyrazolo[4,3-c]pyridin-6-yl group,
3-methyl-1H-pyrazolo[4,3-c]pyridin-6-yl group,
1,3-dimethyl-1H-pyrazolo[4,3-c]pyridin-6-yl group, 1H-pyrazolo[3,4-c]pyridin-5-yl
group, 1H-pyrazolo[3,4-c]pyridin-4-yl group,
1-methyl-1H-pyrazolo[3,4-c]pyridin-5-yl group,
1-ethyl-1H-pyrazolo[3,4-c]pyridin-5-yl group,
3-methyl-1H-pyrazolo[3,4-c]pyridin-5-yl group,
1,3-dimethyl-1H-pyrazolo[3,4-c]pyridin-5-yl group, 1H-pyrazolo[3,4-b]pyridin-5-yl
group, 1H-pyrazolo[3,4-b]pyridin-4-yl group,
1-methyl-1H-pyrazolo[3,4-b]pyridin-5-yl group,
1-ethyl-1H-pyrazolo[3,4-b]pyridin-5-yl group,
3-methyl-1H-pyrazolo[3,4-b]pyridin-5-yl group,
1,3-dimethyl-1H-pyrazolo[3,4-b]pyridin-5-yl group, [1,2,4]triazolo[4,3-a]pyridin-6-yl
group, [1,2,4]triazolo[4,3-a]pyridin-7-yl group,
3-methyl[1,2,4]triazolo[4,3-a]pyridin-6-yl group, thieno[3,2-c]pyridin-2-yl group,
thieno[3,2-c]pyridin-3-yl group, thieno[3,2-c]pyridin-6-yl group,
2-methylthieno[3,2-c]pyridin-2-yl group, 3-methylthieno[3,2-c]pyridin-2-yl group,
thieno[3,2-b]pyridin-2-yl group, thieno[3,2-b]pyridin-3-yl group,
thieno[3,2-b]pyridin-5-yl group, thieno[3,2-b]pyridin-6-yl group,
2-methylthieno[3,2-b]pyridin-2-yl group, 3-methylthieno[3,2-b]pyridin-2-yl group,
1H-thieno[3,2-c]pyrazol-5-yl group, 1H-thieno[3,2-c]pyrazol-4-yl group,
1-methyl-1H-thieno[3,2-c]pyrazol-5-yl group, 1-ethyl-1H-thieno[3,2-c]pyrazol-5-yl
group, 3-methyl-1H-thieno[3,2-c]pyrazol-5-yl group,
1,3-dimethyl-1H-thieno[3,2-c]pyrazol-5-yl group, benzo[d]isoxazol-5-yl group,
benzo[d]isoxazol-4-yl group, benzo[d]isoxazol-6-yl group, benzo[d]isoxazol-7-yl group,

3-methylbenzo[d]isoxazol-5-yl group, benzo[c]isoxazol-5-yl group, benzo[c]isoxazol-4-yl group, benzo[c]isoxazol-6-yl group, benzo[c]isoxazol-7-yl group, 3-methylbenzo[c]isoxazol-5-yl group, indolizin-7-yl group, indolizin-6-yl group, indolizine-8-yl group, 1,3-dihydroindol-2-on-5-yl group, 1,3-dihydroindol-2-on-4-yl group, 1,3-dihydroindol-2-on-6-yl group, 1-methyl-1,3-dihydro-indol-2-on-5-yl group, 1H-pyrazolo[3,4-d]thiazol-5-yl group, 2H-isoindol-5-yl group, 2H-isoindol-4-yl group, 2-methyl-2H-isoindol-5-yl group, 4H-chromen-6-yl group, 4H-chromen-5-yl group, chromen-4-on-7-yl group, chromen-4-on-6-yl group, and the like.

Particularly preferred examples include naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group, 2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, benzob[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group, 1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group,

2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group,
2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group,
2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group,
2-oxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group,
2-thioxo-2,3-dihydrobenzothiazol-6-yl group,
2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group,
quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl
group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group,
1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group,
1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group,
3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group,
imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group,
1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl
group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group,
1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group,
1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, benzoxazol-5-yl group,
and the like.

Particularly preferred examples include naphthalen-2-yl group,
6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group,
6-aminonaphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl group,
benzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group, 1H-indol-5-yl group,
1-methyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, benzothiazol-6-yl group,
2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group,
quinolin-3-yl group, quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group,
benzo[d]isothiazol-5-yl group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl
group, 1-ethyl-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group,
3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group,

imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, 1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, benzoxazol-5-yl group, and the like.

In the formula (I), the group Y is defined to be hydrogen atom, a lower alkyl group having 1 to 4 carbon atoms, -(CH₂)_mN(R¹⁸)(R¹⁹), or -C(R²⁰)₂OC(O)A³R²¹, and among them, hydrogen atom is particularly preferred.

Examples of the lower alkyl group having 1 to 4 carbon atoms include methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, and the like. Among them, methyl group, and ethyl group are particularly preferred.

Symbol m in -(CH₂)_mN(R¹⁸)(R¹⁹) is defined to be an integer of 2 or 3. R¹⁸ is the same as R¹⁹, or binds to R¹⁹ to represent a saturated nitrogen-containing cycloalkyl group forming a 3- to 6-membered ring together with nitrogen atom, or form morpholino group together with nitrogen atom, and R¹⁹ is defined to be methyl group, ethyl group, or propyl group. Examples of -(CH₂)_mN(R¹⁸)(R¹⁹) include 2-(N,N-dimethylamino)ethyl group, 2-(N,N-diethylamino)ethyl group, 2-(N,N-dipropylamino)ethyl group, 3-(N,N-dimethylamino)propyl group, 3-(N,N-diethylamino)propyl group, 2-(N,N-dipropylamino)propyl group, 2-pyrrolidin-1-ylethyl group, 2-piperidin-1-ylethyl group, 2-morpholin-4-ylethyl group, 3-pyrrolidin-1-ylpropyl group, 3-piperidin-1-ylpropyl group, 3-morpholin-4-ylpropyl group, and the like.

R²⁰ in -C(R²⁰)₂OC(O)A³R²¹ is defined to be hydrogen atom, methyl group, ethyl group, or propyl group. R²¹ is defined to be a lower alkyl group having 1 to 4 carbon atoms, a cyclic saturated alkyl group having 3 to 6 carbon atoms group, or phenyl group. Examples of the lower alkyl group having 1 to 4 carbon atoms include methyl group, ethyl group, propyl group, isopropyl group, butyl group,

isobutyl group, t-butyl group, and the like, and examples of the cyclic saturated alkyl group having 3 to 6 carbon atoms group include cyclopropyl group, cyclobutyl group, cyclopentyl group, and cyclohexyl group. A³ is defined to be a single bond, or oxygen atom. Examples of -C(R²⁰)₂OC(O)A³R²¹ include acetoxyethyl group, propionyloxymethyl group, butyryloxymethyl group, (2-methylpropionyloxy)methyl group, (2,2-dimethylpropionyloxy)methyl group, cyclopropionyloxymethyl group, cyclopentanoyloxymethyl group, cyclohexanoyloxymethyl group, phenylcarboxymethyl group, 1-acetoxy-1-methylethyl group, 1-methyl-1-(2-methylpropionyloxy)ethyl group, 1-cyclopentanoyloxy-1-methylethyl group, 1-cyclohexanoyloxy-1-methylethyl group, methoxycarbonyloxymethyl group, ethoxycarbonyloxymethyl group, isopropoxy carbonyloxymethyl group, t-butyloxycarbonyloxymethyl group, cyclopropoxycarbonyloxymethyl group, cyclopentyloxycarbonyloxymethyl group, cyclohexyloxycarbonyloxymethyl group, phenyloxycarbonyloxymethyl group, 1-methoxycarbonyloxy-1-methylethyl group, 1-ethoxycarbonyloxy-1-methylethyl group, 1-isopropoxy carbonyloxy-1-methylethyl group, 1-t-butyloxycarbonyloxy-1-methylethyl group, 1-cyclopropoxycarbonyloxy-1-methylethyl group, 1-cyclopentyloxycarbonyloxy-1-methylethyl group, 1-cyclohexyloxycarbonyloxy-1-methylethyl group, 1-methyl-1-phenyloxycarbonyloxyethyl group, and the like.

In a preferred embodiment of the present invention, the compound represented by the formula (I) or a salt thereof satisfies all of the following requirements.

Link represents -(CH₂)_n-, symbol n represents an integer of 1 to 3.

AR binds to C², RS binds to any of the atoms C³, C⁴ and C⁵, and a ring-constituting carbon atom to which RS does not bind among C³, C⁴, and C⁵ may be replaced with V.

V represents nitrogen atom, or carbon atom substituted with Zx, and Zx represents a group as any one of fluorine atom, chlorine atom, bromine atom, nitro group, methyl group, hydroxyl group, methoxy group, amino group, N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino group, N,N-dimethylamino group, N,N-diethylamino group, formylamino group, acetylamino group, carbamoylamino group, mesylamino group, and N,N-dimethylsulfamoylamino group.

Rs represents -D-Rx, or -N(Ry)(Rz). D represents oxygen atom, or sulfur atom. Rx represents butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-cyclopentylethyl group, or 2-cyclohexylethyl group, or represents Rb or Rc. Q in Rb represents a group as any one of phenyl group, thiienyl group, furyl group, pyridyl group, oxazolyl group, naphthyl group, tetrahydronaphthyl group, indanyl group, indolyl group, and dihydrobenzodioxyl group. A² represents a single bond, oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)- (provided that when A² represents oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)-, A¹ represents ethylene). R² and R³ independently represent hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, dimethylamino group, acetylamino group, or methylsulfonylamino group (provided that when Q represents phenyl group, A¹ represents a single bond, or unsubstituted methylene, and A² represents a single bond, one of R² and R³ represents a substituent other than hydrogen atom). Symbol p in Rc represents an integer of 2 or 3, and A⁴ represents a single bond or methylene. A⁵ represents -C(O)-, -C(S)-, or -S(O)₂-. Rd represents hydrogen atom, or a group as any one of methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, cyclopropyl group, cyclopropylmethyl group, cyclopentyl group, cyclopentylmethyl group, cyclohexyl group, cyclohexylmethyl group, phenyl group,

4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, and pyridin-4-yl group. Re represents a group as any one of methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, cyclopentylmethyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, phenylmethyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, pyridin-4-yl group, furan-2-yl group, furan-3-yl group, thiophen-2-yl group, thiophen-3-yl group, methoxy group, ethoxy group, propyloxy group, isopropyloxy group, butyloxy group, isobutyloxy group, t-butyloxy group, cyclopropyloxy group, cyclopentyloxy group, cyclohexyloxy group, cyclopentylmethoxy group, cyclohexylmethoxy group, phenoxy group, 4-methylphenoxy group, 4-chlorophenoxy group, 4-fluorophenoxy group, thiomethoxy group, amino group, N-methylamino group, N,N-dimethylamino group, N-ethylamino group, N,N-diethylamino group, N-propylamino group, N-isopropylamino group, N-butylamino group, N-isobutylamino group, N-t-butylamino group, N-cyclopropylamino group, N-cyclopentylamino group, N-cyclohexylamino group, N-phenylamino group, N-(4-methylphenyl)amino group, N-(4-chlorophenyl)amino group, N-(4-fluorophenyl)amino group, N-(pyridin-2-yl)amino group, N-(pyridin-3-yl)amino group, N-(pyridin-4-yl)amino group, N-(furan-2-yl)amino group, N-(furan-3-yl)amino group, N-(thiophen-2-yl)amino group, N-(thiophen-3-yl)amino group, pyrrolidino group, piperidino group, morpholino group, methyloxycarbonylamino group, and ethyloxycarbonylamino group.

Rz represents a group as any one of butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl

group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group,

2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group,
2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group,
2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group,
2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl
group, 2-phenyloxyethyl group, 2-(2-chlorophenoxy)ethyl group,
2-(3-chlorophenoxy)ethyl group, 2-(4-chlorophenoxy)ethyl group,
2-(phenylthio)ethyl group, 2-(N-phenyl-N-methylamino)ethyl group,
2-(N-ethyl-N-phenylamino)ethyl group, isobutryl group, isopropylthiocarbonyl
group, isopropylsulfonyl group, valeryl group, butylthiocarbonyl group, isovaleryl
group, isobutylthiocarbonyl group, pivaloyl group, t-butylthiocarbonyl group,
cyclopropylcarbonyl group, cyclopropylthiocarbonyl group, cyclopentylcarbonyl
group, cyclopentylthiocarbonyl group, cyclohexylcarbonyl group,
cyclohexylthiocarbonyl group, cyclopentylmethylearbonyl group,
cyclopentylmethylethiocarbonyl group, cyclohexylmethylearbonyl group,
cyclohexylmethylethiocarbonyl group, benzoyl group, thiobenzoyl group,
phenylsulfonyl group, 4-methylphenylcarbonyl group, 4-methylphenylthiocarbonyl
group, 4-methylphenylsulfonyl group, 4-chlorophenylcarbonyl group,
4-chlorophenylthiocarbonyl group, 4-fluorophenylcarbonyl group,
4-fluorophenylthiocarbonyl group, isopropoxy carbonyl group,
N-isopropylcarbamoyl group, N-isopropylthiocarbamoyl group, butyloxycarbonyl
group, N-butyloxycarbonyl group, N-butylthiocarbonyl group, isobutyloxycarbonyl
group, N-isobutyloxycarbonyl group, N-isobutylthiocarbonyl group,
t-butyloxycarbonyl group, N-t-butyloxycarbonyl group, N-t-butylthiocarbonyl group,
cyclopropoxy carbonyl group, N-cyclopropylcarbamoyl group,
N-cyclopropylthiocarbonyl group, cyclopentyloxy carbonyl group,
N-cyclopentylcarbamoyl group, N-cyclopentylthiocarbonyl group,
cyclohexyloxy carbonyl group, N-cyclohexylcarbamoyl group,

N-cyclohexylthiocarbamoyl group, cyclopentylmethyloxycarbonyl group, cyclohexylmethyloxycarbonyl group, phenoxy carbonyl group, N-phenylcarbamoyl group, N-phenylthiocarbamoyl group, 4-methylphenyloxycarbonyl group, N-(4-methylphenyl)carbamoyl group, N-(4-methylphenyl)thiocarbamoyl group, 4-chlorophenyloxycarbonyl group, N-(4-chlorophenyl)carbamoyl group, N-(4-chlorophenyl)thiocarbamoyl group, 4-fluorophenyloxycarbonyl group, N-(4-fluorophenyl)carbamoyl group, N-(4-fluorophenyl)thiocarbamoyl group, (pyrrolidino-1-yl)carbonyl group, (piperidino-1-yl)carbonyl group, and (morpholino-4-yl)carbonyl group. Ry represents hydrogen atom, methyl group, ethyl group, or isobutyl group, or binds to Rz to form pyrrolidino group, piperidino group, piperazine group, morpholino group, pyrrol-1-yl group, imidazol-1-yl group, or pyrazol-1-yl group together with nitrogen atom.

AR represents naphthalen-2-yl group, naphthalen-1-yl group, benzofuran-5-yl group, benzofuran-4-yl group, benzofuran-2-yl group, benzo[b]thiophen-5-yl group, benzo[b]thiophen-4-yl group, benzo[b]thiophen-2-yl group, indol-5-yl group, indol-4-yl group, indol-6-yl group, benzothiazol-6-yl group, benzothiazol-7-yl group, benzothiazol-5-yl group, benzothiazol-4-yl group, dihydro-3H-benzothiazol-6-yl group, dihydro-3H-benzothiazol-7-yl group, dihydro-3H-benzothiazol-5-yl group, dihydro-3H-benzothiazol-4-yl group, quinolin-6-yl group, quinolin-3-yl group, quinolin-5-yl group, quinolin-7-yl group, dihydro-1H-quinolin-6-yl group, dihydro-1H-quinolin-5-yl group, benzo[d]isothiazol-5-yl group, benzo[d]isothiazol-4-yl group, benzo[d]isothiazol-6-yl group, benzo[d]isothiazol-7-yl group, 1H-indazol-5-yl group, 1H-indazol-4-yl group, 1H-indazol-6-yl group, benzo[c]isothiazol-5-yl group, benzo[c]isothiazol-4-yl group, benzo[c]isothiazol-6-yl group, benzo[c]isothiazol-7-yl group, 2H-indazol-5-yl group, 2H-indazol-4-yl group, 2H-indazol-6-yl group, imidazo[1,2-a]pyridin-6-yl group, imidazo[1,2-a]pyridin-7-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group,

1H-pyrrolo[2,3-h]pyridin-4-yl group, isoquinolin-6-yl group, isoquinolin-3-yl group, isoquinolin-5-yl group, isoquinolin-7-yl group, dihydro-2H-isoquinolin-6-yl group, dihydro-2H-isoquinolin-5-yl group, cinnolin-6-yl group, cinnolin-5-yl group, quinazolin-6-yl group, quinazolin-7-yl group, quinazolin-5-yl group, quinoxalin-2-yl group, quinoxalin-6-yl group, quinoxalin-5-yl group, 1H-benzimidazol-5-yl group, 1H-benzimidazol-4-yl group, benzoxazol-5-yl group, benzoxazol-6-yl group, benzoxazol-4-yl group, benzoxazol-7-yl group, 1H-pyrrolo[3,2-b]pyridin-5-yl group, 1H-pyrrolo[3,2-b]pyridin-6-yl group, benzo[1,2,5]thiadiazol-5-yl group, benzo[1,2,5]thiadiazol-4-yl group, 1H-benzotriazol-5-yl group, 1H-benzotriazol-4-yl group, 1,3-dihydropyrrolo[2,3-h]pyridin-5-yl group, 1,3-dihydrobenzimidazol-4-yl group, 1,3-dihydrobenzimidazol-4-yl group, dihydro-3H-benzoxazol-6-yl group, dihydro-3H-benzoxazol-7-yl group, dihydro-3H-benzoxazol-5-yl group, dihydro-3H-benzoxazol-4-yl group, phthalazin-6-yl group, phthalazin-5-yl group, [1,8]naphthalidin-3-yl group, [1,8]naphthalidin-4-yl group, [1,5]naphthalidin-3-yl group, [1,5]naphthalidin-4-yl group, 1H-pyrrolo[3,2-c]pyridin-6-yl group, 1H-pyrrolo[3,2-c]pyridin-4-yl group, 1H-pyrrolo[2,3-c]pyridin-5-yl group, 1H-pyrrolo[2,3-c]pyridin-4-yl group, 1H-pyrazolo[4,3-b]pyridin-5-yl group, 1H-pyrazolo[4,3-b]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-4-yl group, 1H-pyrazolo[3,4-c]pyridin-5-yl group, 1H-pyrazolo[3,4-c]pyridin-4-yl group, 1H-pyrazolo[3,4-b]pyridin-5-yl group, 1H-pyrazolo[3,4-b]pyridin-4-yl group, [1,2,4]triazolo[4,3-a]pyridin-6-yl group, [1,2,4]triazolo[4,3-a]pyridin-7-yl group, thieno[3,2-c]pyridin-2-yl group, thieno[3,2-c]pyridin-3-yl group, thieno[3,2-c]pyridin-6-yl group, thieno[3,2-b]pyridin-2-yl group, thieno[3,2-b]pyridin-3-yl group, thieno[3,2-b]pyridin-5-yl group, thieno[3,2-b]pyridin-6-yl group, 1H-thieno[3,2-c]pyrazol-5-yl group, 1H-thieno[3,2-c]pyrazol-4-yl group,

benzo[d]isoxazol-5-yl group, benzo[d]isoxazol-4-yl group, benzo[d]isoxazol-6-yl group, benzo[d]isoxazol-7-yl group, benzo[c]isoxazol-5-yl group, benzo[c]isoxazol-4-yl group, benzo[c]isoxazol-6-yl group, benzo[c]isoxazol-7-yl group, indolizin-7-yl group, indolizin-6-yl group, indolizine-8-yl group, 1,3-dihydroindol-5-yl group, 1,3-dihydroindol-4-yl group, 1,3-dihydroindol-6-yl group, 1H-pyrazolo[3,4-d]thiazol-5-yl group, 2H-isoindol-5-yl group, 2H-isoindol-4-yl group, [1,2,4]triazolo[1,5-b]pyrimidin-6-yl group, 1H-pyrazolo[3,4-b]pyrazin-5-yl group, 1H-imidazo[4,5-b]pyrazin-5-yl group, 7H-purin-2-yl group, 4H-chromen-6-yl group, or 4H-chromen-5-yl group (these groups may be substituted with one of X_a or two or more of the same or different X_a). The substituent X_a represents a group as any one of oxo group, thioxo group, fluorine atom, chlorine atom, trifluoromethyl group, methyl group, ethyl group, propyl group, 2-hydroxyethyl group, carboxymethyl group, 2-carboxyethyl group, N,N-dimethylcarbamoylmethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, carboxymethoxy group, 2-carboxyethoxy group, N,N-dimethylcarbamoylmethoxy group, amino group, methylamino group, dimethylamino group, 2-hydroxyethylamino group, carbamoylamino group, acetylamino group, furan-2-carboxyamino group, 2-hydroxyacetylamino group, 2-aminoacetylamino group, methylsulfonylamino group, (N,N-dimethylsulfamoyl)amino group, methanesulfonyl group, sulfamoyl group, N-methylsulfamoyl group, N,N-dimethylsulfamoyl group, carboxyl group, acetyl group, carbamoyl group, and N,N-dimethylcarbamoyl group.

The group Y represents hydrogen atom, methyl group, or ethyl group.

In another preferred embodiment of the present invention, the compound represented by the formula (I) or a salt thereof satisfies all of the following requirements.

Link represents -(CH₂)_n-, symbol n represents an integer of 1 to 3.

AR binds to C^a, RS binds to any of the atoms C⁴, C⁵, and C⁶, and a

ring-constituting carbon atom to which R_s does not bind among C⁴, C⁵, and C⁶ may be replaced with V.

V represents nitrogen atom, or carbon atom substituted with Z_x, and Z_x represents a group as any one of fluorine atom, chlorine atom, bromine atom, nitro group, methyl group, hydroxyl group, methoxy group, amino group, N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino group, N,N-dimethylamino group, N,N-diethylamino group, formylamino group, acetylamino group, carbamoyl amino group, mesylamino group, and N,N-dimethylsulfamoylamino group.

R_s represents -D-R_x, or -N(R_y)(R_z). D represents oxygen atom, or sulfur atom. R_x represents butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-cyclopentylethyl group, or 2-cyclohexylethyl group, or represents R_b, or R_c. Q in R_b represents a group as any one of phenyl group, thiienyl group, furyl group, pyridyl group, oxazolyl group, naphthyl group, tetrahydronaphthyl group, indanyl group, indolyl group, and dihydrobenzodioxyl group. A² represents a single bond, oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)- (provided that when A² represents oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)-, A¹ represents ethylene). R² and R³ independently represent hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, dimethylamino group, acetylamino group, or methylsulfonylamino group (provided that when Q represents phenyl group, A¹ represents a single bond, or unsubstituted methylene, and A² represents a single bond, one of R² and R³ represents a substituent other than hydrogen atom). Symbol p in R_c represents an integer of 2 or 3, and A⁴ represents a single bond or methylene. A⁵ represents -C(O)-, -C(S)-, or -S(O)₂- . R_d represents hydrogen atom, or a group as any one of methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl

group, cyclopropyl group, cyclopropylmethyl group, cyclopentyl group, cyclopentylmethyl group, cyclohexyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, and pyridin-4-yl group. Re represents a group as any one of methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, cyclopentylmethyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, phenylmethyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, pyridin-4-yl group, furan-2-yl group, furan-3-yl group, thiophen-2-yl group, thiophen-3-yl group, methoxy group, ethoxy group, propyloxy group, isopropyloxy group, butyloxy group, isobutyloxy group, t-butyloxy group, cyclopropyloxy group, cyclopentyloxy group, cyclohexyloxy group, cyclopentylmethoxy group, cyclohexylmethoxy group, phenoxy group, 4-methylphenoxy group, 4-chlorophenoxy group, 4-fluorophenoxy group, thiomethoxy group, amino group, N-methylamino group, N,N-dimethylamino group, N-ethylamino group, N,N-diethylamino group, N-propylamino group, N-isopropylamino group, N-butylamino group, N-isobutylamino group, N-t-butylamino group, N-cyclopropylamino group, N-cyclopentylamino group, N-cyclohexylamino group, N-phenylamino group, N-(4-methylphenyl)amino group, N-(4-chlorophenyl)amino group, N-(4-fluorophenyl)amino group, N-(pyridin-2-yl)amino group, N-(pyridin-3-yl)amino group, N-(pyridin-4-yl)amino group, N-(furan-2-yl)amino group, N-(furan-3-yl)amino group, N-(thiophen-2-yl)amino group, N-(thiophen-3-yl)amino group, pyrrolidino group, piperidino group, morpholino group, methyloxycarbonylamino group, and ethyloxycarbonylamino group. Rz represents a group as any of butyl group,

isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group,

2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group,
2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group,
2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group,
2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group,
2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group,
2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group,
2-(2-chlorophenoxyethyl group, 2-(3-chlorophenoxyethyl group,
2-(4-chlorophenoxyethyl group, 2-(phenylthio)ethyl group,
2-(N-phenyl-N-methylamino)ethyl group, 2-(N-ethyl-N-phenylamino)ethyl group,
isobutyryl group, isopropylthiocarbonyl group, isopropylsulfonyl group, valeryl
group, butylthiocarbonyl group, isovaleryl group, isobutylthiocarbonyl group,
pivaloyl group, t-butylthiocarbonyl group, cyclopropylcarbonyl group,
cyclopropylthiocarbonyl group, cyclopentylcarbonyl group, cyclopentylthiocarbonyl
group, cyclohexylcarbonyl group, cyclohexylthiocarbonyl group,
cyclopentylmethylcarbonyl group, cyclopentylmethylthiocarbonyl group,
cyclohexylmethylcarbonyl group, cyclohexylmethylthiocarbonyl group, benzoyl
group, thiobenzoyl group, phenylsulfonyl group, 4-methylphenylcarbonyl group,
4-methylphenylthiocarbonyl group, 4-methylphenylsulfonyl group,
4-chlorophenylcarbonyl group, 4-chlorophenylthiocarbonyl group,
4-fluorophenylcarbonyl group, 4-fluorophenylthiocarbonyl group,
isopropyloxycarbonyl group, N-isopropylcarbamoyl group, N-isopropylthiocarbamoyl
group, butyloxycarbonyl group, N-butyloxycarbonyl group, N-butyloxycarbonyl
group, isobutyloxycarbonyl group, N-isobutyloxycarbonyl group,
N-isobutylthiocarbamoyl group, t-butyloxycarbonyl group, N-t-butyloxycarbonyl
group, N-t-butyloxycarbonyl group, cyclopropyloxycarbonyl group,
N-cyclopropylcarbamoyl group, N-cyclopropylthiocarbamoyl group,
cyclopentyloxycarbonyl group, N-cyclopentyloxycarbonyl group,

N-cyclopentylthiocarbamoyl group, cyclohexyloxycarbonyl group,
N-cyclohexylcarbamoyl group, N-cyclohexylthiocarbamoyl group,
cyclopentylmethyloxycarbonyl group, cyclohexylmethyloxycarbonyl group,
phenyloxycarbonyl group, N-phenylcarbamoyl group, N-phenylthiocarbamoyl group,
4-methylphenyloxycarbonyl group, N-(4-methylphenyl)carbamoyl group,
N-(4-methylphenyl)thiocarbamoyl group, 4-chlorophenyloxycarbonyl group,
N-(4-chlorophenyl)carbamoyl group, N-(4-chlorophenyl)thiocarbamoyl group,
4-fluorophenyloxycarbonyl group, N-(4-fluorophenyl)carbamoyl group,
N-(4-fluorophenyl)thiocarbamoyl group, (pyrrolidino-1-yl)carbonyl group,
(piperidino-1-yl)carbonyl group, and (morpholino-4-yl)carbonyl group. Ry
represents hydrogen atom, methyl group, ethyl group, or isobutyl group, or binds to
Rz to form pyrrolidino group, piperidino group, piperazino group, morpholino group,
pyrrol-1-yl group, imidazol-1-yl group, or pyrazol-1-yl group together with the
nitrogen atom to which they binds.

AR represents naphthalen-2-yl group, naphthalen-1-yl group,
benzofuran-5-yl group, benzofuran-4-yl group, benzofuran-2-yl group,
benzo[b]thiophen-5-yl group, benzo[b]thiophen-4-yl group, benzo[b]thiophen-2-yl
group, indol-5-yl group, indol-4-yl group, indol-6-yl group, benzothiazol-6-yl group,
benzothiazol-7-yl group, benzothiazol-5-yl group, benzothiazol-4-yl group,
dihydro-3H-benzothiazol-6-yl group, dihydro-8H-benzothiazol-7-yl group,
dihydro-3H-benzothiazol-5-yl group, dihydro-3H-benzothiazol-4-yl group,
quinolin-6-yl group, quinolin-3-yl group, quinolin-5-yl group, quinolin-7-yl group,
dihydro-1H-quinolin-6-yl group, dihydro-1H-quinolin-5-yl group,
benzo[d]isothiazol-5-yl group, benzo[d]isothiazol-4-yl group, benzo[d]isothiazol-6-yl
group, benzo[d]isothiazol-7-yl group, 1H-indazol-5-yl group, 1H-indazol-4-yl group,
1H-indazol-6-yl group, benzo[c]isothiazol-5-yl group, benzo[c]isothiazol-4-yl group,
benzo[c]isothiazol-6-yl group, benzo[c]isothiazol-7-yl group, 2H-indazol-5-yl group,

2H-indazol-4-yl group, 2H-indazol-6-yl group, imidazo[1,2-a]pyridin-6-yl group, imidazo[1,2-a]pyridin-7-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1H-pyrrolo[2,3-b]pyridin-4-yl group, isoquinolin-6-yl group, isoquinolin-3-yl group, isoquinolin-5-yl group, isoquinolin-7-yl group, dihydro-2H-isoquinolin-6-yl group, dihydro-2H-isoquinolin-5-yl group, cinnolin-6-yl group, cinnolin-5-yl group, quinazolin-6-yl group, quinazolin-7-yl group, quinazolin-5-yl group, quinoxalin-2-yl group, quinoxalin-6-yl group, quinoxalin-5-yl group, 1H-benzimidazol-5-yl group, 1H-benzimidazol-4-yl group, benzoxazol-5-yl group, benzoxazol-6-yl group, benzoxazol-4-yl group, benzoxazol-7-yl group, 1H-pyrrolo[3,2-b]pyridin-5-yl group, 1H-pyrrolo[3,2-b]pyridin-6-yl group, benzo[1,2,5]thiadiazol-5-yl group, benzo[1,2,5]thiadiazol-4-yl group, 1H-benzotriazol-5-yl group, 1H-benzotriazol-4-yl group, 1,3-dihydropyrrolo[2,3-b]pyridin-5-yl group, 1,3-dihydrobenzimidazol-5-yl group, 1,3-dihydrobenzimidazol-4-yl group, dihydro-3H-benzoxazol-6-yl group, dihydro-3H-benzoxazol-7-yl group, dihydro-3H-benzoxazol-5-yl group, dihydro-3H-benzoxazol-4-yl group, phthalazin-6-yl group, phthalazin-5-yl group, [1,8]naphthalidin-3-yl group, [1,8]naphthalidin-4-yl group, [1,5]naphthalidin-3-yl group, [1,5]naphthalidin-4-yl group, 1H-pyrrolo[3,2-c]pyridin-6-yl group, 1H-pyrrolo[3,2-c]pyridin-4-yl group, 1H-pyrrolo[2,3-c]pyridin-5-yl group, 1H-pyrrolo[2,3-c]pyridin-4-yl group, 1H-pyrazolo[4,3-b]pyridin-5-yl group, 1H-pyrazolo[4,3-b]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-4-yl group, 1H-pyrazolo[3,4-c]pyridin-5-yl group, 1H-pyrazolo[3,4-c]pyridin-4-yl group, 1H-pyrazolo[3,4-b]pyridin-5-yl group, 1H-pyrazolo[3,4-b]pyridin-4-yl group, [1,2,4]triazolo[4,3-a]pyridin-6-yl group, [1,2,4]triazolo[4,3-a]pyridin-7-yl group, thieno[3,2-c]pyridin-2-yl group, thieno[3,2-c]pyridin-3-yl group, thieno[3,2-b]pyridin-2-yl group, thieno[3,2-b]pyridin-3-yl group,

thieno[3,2-b]pyridin-5-yl group, thieno[3,2-b]pyridin-6-yl group,
1H-thieno[3,2-c]pyrazol-5-yl group, 1H-thieno[3,2-c]pyrazol-4-yl group,
benzo[d]isoxazol-5-yl group, benzo[d]isoxazol-4-yl group, benzodisoxazol-6-yl group,
benzo[d]isoxazol-7-yl group, benzo[c]isoxazol-5-yl group, benzo[c]isoxazol-4-yl group,
benzo[c]isoxazol-6-yl group, benzo[c]isoxazol-7-yl group, indolizin-7-yl group,
indolizin-6-yl group, indolizine-8-yl group, 1,3-dihydroindol-5-yl group,
1,3-dihydroindol-4-yl group, 1,3-dihydroindol-6-yl group,
1H-pyrazolo[3,4-d]thiazol-5-yl group, 2H-isoindol-5-yl group, 2H-isoindol-4-yl group,
[1,2,4]triazolo[1,5-a]pyrimidin-6-yl group, 1H-pyrazolo[3,4-b]pyrazin-5-yl group,
1H-imidazo[4,5-b]pyrazin-5-yl group, 7H-purin-2-yl group, 4H-chromen-6-yl group,
or 4H-chromen-5-yl group (the aforementioned groups may be substituted with one
of Xa or two or more of the same or different Xa). The substituent Xa represents a
group as any one of oxo group, thioxo group, fluorine atom, chlorine atom,
trifluoromethyl group, methyl group, ethyl group, propyl group, 2-hydroxyethyl
group, carboxymethyl group, 2-carboxyethyl group, N,N-dimethylcarbamoylmethyl
group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, carboxymethoxy
group, 2-carboxyethoxy group, N,N-dimethylcarbamoylmethoxy group, amino
group, methylamino group, dimethylamino group, 2-hydroxyethylamino group,
carbamoylaminogroup, acetylamino group, furan-2-carboxyamino group,
2-hydroxyacetylamino group, 2-aminoacetylamino group, methylsulfonylamino
group, (N,N-dimethylsulfamoyl)amino group, methanesulfonyl group, sulfamoyl
group, N-methylsulfamoyl group, N,N-dimethylsulfamoyl group, carboxyl group,
acetyl group, carbamoyl group, and N,N-dimethylcarbamoyl group.

The group Y represents hydrogen atom, methyl group, or ethyl group.

In a preferred embodiment of the present invention, a compound or a salt
thereof satisfying all of the following requirements is excluded from the compound
represented by the formula (I) or a salt thereof.

Link represents -(CH₂)_n, symbol n represents an integer of 1 to 3.

C³ represents carbon atom to which AR bonds, C⁴ represents carbon atom to which Rs bonds, C⁵ represents a ring-constituting carbon atom which may be substituted with Zx, and C² and C⁶ represent unsubstituted ring-constituting carbon atom.

Zx represents fluorine atom, chlorine atom, nitro group, amino group, methyl group, or a OR⁹ group, and R⁹ represents hydrogen atom or a lower alkyl group having 1 to 4 carbon atoms.

Rs represents -O-Rx. Rx represents a linear or branched saturated alkyl group having 3 to 8 carbon atoms, or represents Ra or Rb, Q in Rb represents a residue of a partially unsaturated or completely unsaturated monocyclic or condensed bicyclic carbon ring or heterocyclic ring (q), and binds to A² at an arbitrary position on the ring. The heterocyclic ring (q) contains one or two of the same or different ring-constituting heteroatoms selected from the group consisting of nitrogen atom, oxygen atom, and sulfur atom.

AR represents a residue of naphthalene, benzofuran, benzo[b]thiophene, indole, benzothiazole, dihydro-3H-benzothiazole, quinoline, dihydro-1H-quinoline, benzod[*d*]isothiazole, 1H-indazole, benzod[*c*]isothiazole, 2H-indazole, imidazo[1,2-*a*]pyridine, 1H-pyrrolo[2,3-*b*]pyridine, isoquinoline, or dihydro-2H-isoquinoline (the aforementioned residue may be substituted with one of Xa or two or more of the same or different Xa).

In another preferred embodiment of the present invention, the compound represented by the formula (I) or a salt thereof satisfies all of the following requirements.

Link represents -(CH₂)_n, symbol n represents an integer of 1 to 3.

C³ represents carbon atom to which AR bonds, C⁴ represents carbon atom to which Rs bonds, C⁵ may be replaced with V, and C² and C⁶ represent unsubstituted

ring constituting carbon atom.

V represents nitrogen atom, or carbon atom substituted with Zx, and Zx represents a group as any one of fluorine atom, chlorine atom, bromine atom, nitro group, methyl group, hydroxyl group, methoxy group, amino group, N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino group, N,N-dimethylamino group, N,N-diethylamino group, formylamino group, acetylamino group, carbamoylaminogroup, mesylamino group, and N,N-dimethylsulfamoylaminogroup.

Rs represents -O-Rx. Rx represents butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-cyclopentylethyl group, or 2-cyclohexylethyl group, or represents Rb or Rc. Q in Rb represents a group as any one of phenyl group, thienyl group, furyl group, pyridyl group, oxazolyl group, naphthyl group, tetrahydronaphthyl group, indanyl group, indolyl group, and dihydrobenzodioxyl group. A² represents a single bond, oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)- (provided that when A² represents oxygen atom, sulfur atom, -N(methyl)-, or -N(ethyl)-, A¹ represents ethylene). R² and R³ independently represent hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, dimethylamino group, acetylamino group, or methylsulfonylamino group (provided that when Q represents phenyl group, A¹ represents a single bond, or unsubstituted methylene, and A² represents a single bond, one of R² and R³ represents a substituent other than hydrogen atom). Symbol p in Rc represents an integer of 2 or 3, and A⁴ represents a single bond or methylene. A⁵ represents -C(O)-, -C(S)-, or -S(O)₂-. Rd represents hydrogen atom, or a group as any one of methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, cyclopropyl group, cyclopropylmethyl group, cyclopentyl group, cyclopentylmethyl group, cyclohexyl group, cyclohexylmethyl group, phenyl group,

4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, and pyridin-4-yl group. Re represents a group as any one of methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, cyclopentylmethyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, phenylmethyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, pyridin-4-yl group, furan-2-yl group, furan-3-yl group, thiophen-2-yl group, thiophen-3-yl group, methoxy group, ethoxy group, propyloxy group, isopropyloxy group, butyloxy group, isobutyloxy group, t-butyloxy group, cyclopropyloxy group, cyclopentyloxy group, cyclohexyloxy group, cyclopentylmethoxy group, cyclohexylmethoxy group, phenoxy group, 4-methylphenoxy group, 4-chlorophenoxy group, 4-fluorophenoxy group, thiomethoxy group, amino group, N-methylamino group, N,N-dimethylamino group, N-ethylamino group, N,N-diethylamino group, N-propylamino group, N-isopropylamino group, N-butylamino group, N-isobutylamino group, N-t-butylamino group, N-cyclopropylamino group, N-cyclopentylamino group, N-cyclohexylamino group, N-phenylamino group, N-(4-methylphenyl)amino group, N-(4-chlorophenyl)amino group, N-(4-fluorophenyl)amino group, N-(pyridin-2-yl)amino group, N-(pyridin-3-yl)amino group, N-(pyridin-4-yl)amino group, N-(furan-2-yl)amino group, N-(furan-3-yl)amino group, N-(thiophen-2-yl)amino group, N-(thiophen-3-yl)amino group, pyrrolidino group, piperidino group, morpholino group, methyloxycarbonylamino group, and ethyloxycarbonylamino group.

AR represents any one of cinnolin-6-yl group, cinnolin-5-yl group, quinazolin-6-yl group, quinazolin-7-yl group, quinazolin-5-yl group, quinoxalin-2-yl

group, quinoxalin-6-yl group, quinoxalin-5-yl group, 1H-benzimidazol-5-yl group, 1H-benzimidazol-4-yl group, benzoxazol-5-yl group, benzoxazol-6-yl group, benzoxazol-4-yl group, benzoxazol-7-yl group, 1H-pyrrolo[3,2-b]pyridin-5-yl group, 1H-pyrrolo[3,2-b]pyridin-6-yl group, benzo[1,2,5]thiadiazol-5-yl group, benzo[1,2,5]thiadiazol-4-yl group, 1H-benzotriazol-5-yl group, 1H-benzotriazol-4-yl group, 1,3-dihydropyrrolo[2,3-b]pyridin-5-yl group, 1,3-dihydropyrrolo[2,3-b]pyridin-4-yl group, 1,3-dihydrobenzimidazol-5-yl group, 1,3-dihydrobenzimidazol-4-yl group, dihydro-3H-benzoxazol-6-yl group, dihydro-3H-benzoxazol-7-yl group, dihydro-3H-benzoxazol-5-yl group, dihydro-3H-benzoxazol-4-yl group, phthalazin-6-yl group, phthalazin-5-yl group, [1,8]naphthalidin-3-yl group, [1,8]naphthalidin-4-yl group, [1,5]naphthalidin-3-yl group, [1,5]naphthalidin-4-yl group, 1H-pyrrolo[3,2-c]pyridin-6-yl group, 1H-pyrrolo[3,2-c]pyridin-4-yl group, 1H-pyrrolo[2,3-c]pyridin-4-yl group, 1H-pyrazolo[4,3-b]pyridin-5-yl group, 1H-pyrazolo[4,3-b]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-4-yl group, 1H-pyrazolo[3,4-c]pyridin-5-yl group, 1H-pyrazolo[3,4-c]pyridin-4-yl group, 1H-pyrazolo[3,4-b]pyridin-5-yl group, 1H-pyrazolo[3,4-b]pyridin-4-yl group, [1,2,4]triazolo[4,3-a]pyridin-6-yl group, [1,2,4]triazolo[4,3-a]pyridin-7-yl group, thieno[3,2-c]pyridin-2-yl group, thieno[3,2-c]pyridin-3-yl group, thieno[3,2-b]pyridin-2-yl group, thieno[3,2-b]pyridin-3-yl group, thieno[3,2-b]pyridin-5-yl group, thieno[3,2-b]pyridin-6-yl group, 1H-thieno[3,2-c]pyrazol-5-yl group, 1H-thieno[3,2-c]pyrazol-4-yl group, benzo[d]isoxazol-5-yl group, benzo[d]isoxazol-4-yl group, benzo[d]isoxazol-6-yl group, benzo[d]isoxazol-7-yl group, benzo[c]isoxazol-5-yl group, benzo[c]isoxazol-4-yl group, benzo[c]isoxazol-6-yl group, benzo[c]isoxazol-7-yl group, indolizin-7-yl group, indolizin-6-yl group, indolizine-8-yl group, 1,3-dihydroindol-5-yl group, .

1,3-dihydroindol-4-yl group, 1,3-dihydroindol-6-yl group,
1H-pyrazolo[3,4-d]thiazol-5-yl group, 2H-isoindol-5-yl group, 2H-isoindol-4-yl group,
[1,2,4]triazolo[1,5-a]pyrimidin-6-yl group, 1H-pyrazolo[3,4-b]pyrazin-5-yl group,
1H-imidazo[4,5-b]pyrazin-5-yl group, 7H-purin-2-yl group, 4H-chromen-6-yl group,
and 4H-chromen-5-yl group (these groups may be substituted with one of Xa or two
or more of the same or different Xa). The substituent Xa represents a group as any
one of oxo group, thioxo group, fluorine atom, chlorine atom, trifluoromethyl group,
methyl group, ethyl group, propyl group, 2-hydroxyethyl group, carboxymethyl
group, 2-carboxyethyl group, N,N-dimethylcarbamoylmethyl group, hydroxyl group,
methoxy group, 2-hydroxyethoxy group, carboxymethoxy group,
2-carboxyethoxy group, N,N-dimethylcarbamoylmethoxy group, amino group,
methylamino group, dimethylamino group, 2-hydroxyethylamino group,
carbamoylamino group, acetylamino group, furan-2-carboxyamino group,
2-hydroxyacetylamino group, 2-aminoacetylamino group, methylsulfonylamino
group, (N,N-dimethylsulfamoyl)amino group, methanesulfonyl group, sulfamoyl
group, N-methylsulfamoyl group, N,N-dimethylsulfamoyl group, carboxyl group,
acetyl group, carbamoyl group, and N,N-dimethylcarbamoyl group.

The group Y represents hydrogen atom, methyl group, or ethyl group.

In another preferred embodiment of the present invention, the compound
represented by the formula (I) or a salt thereof satisfies all of the following
requirements.

Link represents -(CH₂)_n-, symbol n represents an integer of 1 to 3.

C³ represents carbon atom to which AR bonds, C⁴ represents carbon atom to
which Rs bonds, C⁵ may be replaced with V, and C² and C⁶ represent unsubstituted
ring-constituting carbon atom.

V represents nitrogen atom, or carbon atom substituted with Zx, and Zx
represents a group as any one of, chlorine atom, bromine atom, nitro group, methyl

group, hydroxyl group, methoxy group, amino group, N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino group, N,N-dimethylamino group, N,N-diethylamino group, formylamino group, acetylamino group, carbamoyl amino group, mesylamino group, and N,N-dimethylsulfamoylamino group.

Rs represents -S-Rx. Rx represents butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-cyclopentylethyl group, or 2-cyclohexylethyl group, or represents Rb or Rc. Q in Rb represents a group as any one of phenyl group, thieryl group, furyl group, pyridyl group, oxazolyl group, naphthyl group, tetrahydronaphthyl group, indanyl group, indolyl group, and dihydrobenzodioxyl group. A² represents a single bond, oxygen atom, sulfur atom, -N(methyl), or -N(ethyl)· (provided that when A² represents oxygen atom, sulfur atom, -N(methyl)·, or -N(ethyl)·, A¹ represents ethylene). R² and R³ independently represent hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, dimethylamino group, acetylamino group, or methylsulfonylamino group (provided that when Q represents phenyl group, A¹ represents a single bond, or unsubstituted methylene, and A² represents a single bond, one of R² and R³ represents a substituent other than hydrogen atom). Symbol p in Rc represents an integer of 2 or 3, and A⁴ represents a single bond or methylene. A⁵ represents -C(O)-, -C(S)-, or -S(O)₂-. Rd represents hydrogen atom, or a group as any one of methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, cyclopropyl group, cyclopropylmethyl group, cyclopentyl group, cyclopentylmethyl group, cyclohexyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, and pyridin-4-yl group. Re represents a group as any one of

methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, cyclopentylmethyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, phenylmethyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, pyridin-4-yl group, methoxy group, ethoxy group, propyloxy group, isopropyloxy group, butyloxy group, isobutyloxy group, t-butyloxy group, cyclopropyloxy group, cyclopentyloxy group, cyclohexyloxy group, cyclopentylmethoxy group, cyclohexylmethoxy group, phenoxy group, 4-methylphenoxy group, 4-chlorophenoxy group, 4-fluorophenoxy group, thiomethoxy group, amino group, N-methylamino group, N,N-dimethylamino group, N-ethylamino group, N,N-diethylamino group, N-propylamino group, N-isopropylamino group, N-butylamino group, N-isobutylamino group, N-t-butylamino group, N-cyclopropylamino group, N-cyclopentylamino group, N-cyclohexylamino group, N-phenylamino group, N-(4-methylphenyl)amino group, N-(4-chlorophenyl)amino group, N-(4-fluorophenyl)amino group, N-(pyridin-2-yl)amino group, N-(pyridin-3-yl)amino group, N-(pyridin-4-yl)amino group, N-(furan-2-yl)amino group, N-(furan-3-yl)amino group, N-(thiophen-2-yl)amino group, N-(thiophen-3-yl)amino group, pyrrolidino group, piperidino group, morpholino group, methyloxycarbonylaminio group, and ethyloxycarbonylaminio group.

AR represents naphthalen-2-yl group, naphthalen-1-yl group, benzofuran-5-yl group, benzofuran-4-yl group, benzofuran-2-yl group, benzo[b]thiophen-5-yl group, benzo[b]thiophen-4-yl group, benzo[b]thiophen-2-yl group, indol-5-yl group, indol-4-yl group, indol-6-yl group, benzothiazol-6-yl group, benzothiazol-7-yl group, benzothiazol-5-yl group, benzothiazol-4-yl group, dihydro-3H-benzothiazol-6-yl group, dihydro-3H-benzothiazol-7-yl group,

dihydro-3H-benzothiazol-5-yl group, dihydro-3H-benzothiazol-4-yl group,
quinolin-6-yl group, quinolin-3-yl group, quinolin-5-yl group, quinolin-7-yl group,
dihydro-1H-quinolin-6-yl group, dihydro-1H-quinolin-5-yl group,
benzo[d]isothiazol-5-yl group, benzo[d]isothiazol-4-yl group, benzo[d]isothiazol-6-yl
group, benzo[d]isothiazol-7-yl group, 1H-indazol-5-yl group, 1H-indazol-4-yl group,
1H-indazol-6-yl group, benzo[c]isothiazol-5-yl group, benzo[c]isothiazol-4-yl group,
benzo[c]isothiazol-6-yl group, benzo[c]isothiazol-7-yl group, 2H-indazol-5-yl group,
2H-indazol-4-yl group, 2H-indazol-6-yl group, imidazo[1,2-a]pyridin-6-yl group,
imidazo[1,2-a]pyridin-7-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group,
1H-pyrrolo[2,3-b]pyridin-4-yl group, isoquinolin-6-yl group, isoquinolin-3-yl group,
isoquinolin-5-yl group, isoquinolin-7-yl group, dihydro-2H-isoquinolin-6-yl group,
dihydro-2H-isoquinolin-5-yl group, cinnolin-6-yl group, cinnolin-5-yl group,
quiazolin-6-yl group, quiazolin-7-yl group, quiazolin-5-yl group, quinoxalin-2-yl
group, quinoxalin-6-yl group, quinoxalin-5-yl group, 1H-benzimidazol-5-yl group,
1H-benzimidazol-4-yl group, benzoxazol-5-yl group, benzoxazol-6-yl group,
benzoxazol-4-yl group, benzoxazol-7-yl group, 1H-pyrrolo[3,2-b]pyridin-5-yl group,
1H-pyrrolo[3,2-b]pyridin-6-yl group, benzo[1,2,5]thiadiazol-5-yl group,
benzo[1,2,5]thiadiazol-4-yl group, 1H-benzotriazol-5-yl group, 1H-benzotriazol-4-yl
group, 1,3-dihydropyrrolo[2,3-b]pyridin-5-yl group,
1,3-dihydropyrrolo[2,3-b]pyridin-4-yl group, 1,3-dihydrobenzimidazol-5-yl group,
1,3-dihydrobenzimidazol-4-yl group, dihydro-3H-benzoxazol-6-yl group,
dihydro-3H-benzoxazol-7-yl group, dihydro-3H-benzoxazol-5-yl group,
dihydro-3H-benzoxazol-4-yl group, phthalazin-6-yl group, phthalazin-5-yl group,
[1,8]naphthalidin-3-yl group, [1,8]naphthalidin-4-yl group, [1,5]naphthalidin-3-yl
group, [1,5]naphthalidin-4-yl group, 1H-pyrrolo[3,2-c]pyridin-6-yl group,
1H-pyrrolo[3,2-c]pyridin-4-yl group, 1H-pyrrolo[2,3-c]pyridin-5-yl group,
1H-pyrrolo[2,3-c]pyridin-4-yl group, 1H-pyrazolo[4,3-b]pyridin-5-yl group,

1H-pyrazolo[4,3-b]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-6-yl group,
1H-pyrazolo[4,3-c]pyridin-4-yl group, 1H-pyrazolo[3,4-c]pyridin-5-yl group,
1H-pyrazolo[3,4-c]pyridin-4-yl group, 1H-pyrazolo[3,4-b]pyridin-5-yl group,
1H-pyrazolo[3,4-b]pyridin-4-yl group, [1,2,4]triazolo[4,3-a]pyridin-6-yl group,
[1,2,4]triazolo[4,3-a]pyridin-7-yl group, thieno[3,2-c]pyridin-2-yl group,
thieno[3,2-c]pyridin-3-yl group, thieno[3,2-c]pyridin-6-yl group,
thieno[3,2-b]pyridin-2-yl group, thieno[3,2-b]pyridin-3-yl group,
thieno[3,2-b]pyridin-5-yl group, thieno[3,2-b]pyridin-6-yl group,
1H-thieno[3,2-c]pyrazol-5-yl group, 1H-thieno[3,2-c]pyrazol-4-yl group,
benzo[d]isoxazol-5-yl group, benzo[d]isoxazol-4-yl group, benzo[d]isoxazol-6-yl group,
benzo[d]isoxazol-7-yl group, benzo[c]isoxazol-5-yl group, benzo[c]isoxazol-4-yl group,
benzo[c]isoxazol-6-yl group, benzo[c]isoxazol-7-yl group, indolizin-7-yl group,
indolizin-6-yl group, indolizine-8-yl group, 1,3-dihydroindol-5-yl group,
1,3-dihydroindol-4-yl group, 1,3-dihydroindol-6-yl group,
1H-pyrazolo[3,4-d]thiazol-5-yl group, 2H-isoindol-5-yl group, 2H-isoindol-4-yl group,
[1,2,4]triazolo[1,5-a]pyrimidin-6-yl group, 1H-pyrazolo[3,4-b]pyrazin-5-yl group,
1H-imidazo[4,5-b]pyrazin-5-yl group, 7H-purin-2-yl group, 4H-chromen-6-yl group,
or 4H-chromen-5-yl group (these groups may be substituted with one of Xa or two or
more of the same or different Xa). The substituent Xa represents a group as any
one of oxo group, thioxo group, fluorine atom, chlorine atom, trifluoromethyl group,
methyl group, ethyl group, propyl group, 2-hydroxyethyl group, carboxymethyl
group, 2-carboxyethyl group, N,N-dimethylcarbamoylmethyl group, hydroxyl group,
methoxy group, 2-hydroxyethoxy group, carboxymethoxy group,
2-carboxyethoxy group, N,N-dimethylcarbamoylmethoxy group, amino group,
methylamino group, dimethylamino group, 2-hydroxyethylamino group,
carbamoylamino group, acetylamino group, furan-2-carboxyamino group,
2-hydroxyacetylamino group, 2-aminoacetylamino group, methylsulfonylamino

group, (N,N-dimethylsulfamoyl)amino group, methanesulfonyl group, sulfamoyl group, N-methylsulfamoyl group, N,N-dimethylsulfamoyl group, carboxyl group, acetyl group, carbamoyl group, and N,N-dimethylcarbamoyl group.

The group Y represents hydrogen atom, methyl group, or ethyl group.

In another preferred embodiment of the present invention, the compound represented by the formula (I) or a salt thereof satisfies all of the following requirements.

Link represents -(CH₂)_n-, symbol n represents an integer of 1 to 3.

C³ represents carbon atom to which AR bonds, C⁴ represents carbon atom to which Rs bonds, and C², C⁵ and C⁶ represent unsubstituted ring-constituting carbon atom.

Rs represents -N(Ry)(Rz). Ry represents a group as any one of butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group,

2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group, 2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group, 2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group, 2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group, 2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group, 2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group, 2-(N-phenyl-N'-methylamino)ethyl group, 2-(N-ethyl-N'-phenylamino)ethyl group, isobutryl group, isopropylthiocarbonyl group, isopropylsulfonyl group, valeryl group, butylthiocarbonyl group, isovaleryl group, isobutylthiocarbonyl group, pivaloyl group, t-butylthiocarbonyl group, cyclopropylcarbonyl group, cyclopentylcarbonyl group, cyclopentylthiocarbonyl group, cyclohexylcarbonyl group, cyclohexylthiocarbonyl group, cyclopentylmethylcarbonyl group, cyclopentylmethylthiocarbonyl group,

cyclohexylmethylcarbonyl group, cyclohexylmethylthiocarbonyl group, benzoyl group, thiobenzoyl group, phenylsulfonyl group, 4-methylphenylcarbonyl group, 4-methylphenylthiocarbonyl group, 4-methylphenylsulfonyl group, 4-chlorophenylcarbonyl group, 4-chlorophenylthiocarbonyl group, 4-fluorophenylcarbonyl group, 4-fluorophenylthiocarbonyl group, isopropoxy carbonyl group, N-isopropylcarbamoyl group, N-isopropylthiocarbamoyl group, butyloxycarbonyl group, N-butyloxycarbonyl group, N-butyloxylthiocarbamoyl group, isobutyloxycarbonyl group, N-isobutyloxycarbonyl group, N-isobutylthiocarbamoyl group, N-isobutylthiocarbamoyl group, t-butyloxycarbonyl group, N-t-butyloxycarbonyl group, N-t-butyloxycarbonyl group, N-t-butyloxycarbonyl group, cyclopropoxy carbonyl group, N-cyclopropylcarbamoyl group, N-cyclopentylthiocarbamoyl group, cyclopentyloxy carbonyl group, N-cyclopentylcarbamoyl group, N-cyclopentylthiocarbamoyl group, cyclohexyloxy carbonyl group, N-cyclohexylthiocarbamoyl group, N-cyclohexylcarbamoyl group, N-cyclohexylthiocarbamoyl group, cyclopentylmethoxy carbonyl group, cyclohexylmethoxy carbonyl group, phenoxy carbonyl group, N-phenylcarbamoyl group, N-phenylthiocarbamoyl group, 4-methylphenoxy carbonyl group, N-(4-methylphenyl)carbamoyl group, N-(4-methylphenyl)thiocarbamoyl group, 4-chlorophenoxy carbonyl group, N-(4-chlorophenyl)carbamoyl group, N-(4-chlorophenyl)thiocarbamoyl group, 4-fluorophenoxy carbonyl group, N-(4-fluorophenyl)carbamoyl group, N-(4-fluorophenyl)thiocarbamoyl group, (pyrrolidino-1-yl)carbonyl group, (piperidino-1-yl)carbonyl group, and (morpholino-4-yl)carbonyl group. Ry represents hydrogen atom, methyl group, ethyl group, or isobutyl group, or binds to Rz to form pyrrolidino group, piperidino group, piperazino group, morpholino group, pyrrol-1-yl group, imidazol-1-yl group, or pyrazol-1-yl group together with the nitrogen atom to which they bind.

AR represents naphthalen-2-yl group, naphthalen-1-yl group,

benzofuran-5-yl group, benzofuran-4-yl group, benzofuran-2-yl group,
benzo[b]thiophen-5-yl group, benzo[b]thiophen-4-yl group, benzo[b]thiophen-2-yl
group, indol-5-yl group, indol-4-yl group, indol-6-yl group, benzothiazol-6-yl group,
benzothiazol-7-yl group, benzothiazol-5-yl group, benzothiazol-4-yl group,
dihydro-3H-benzothiazol-6-yl group, dihydro-3H-benzothiazol-7-yl group,
dihydro-3H-benzothiazol-5-yl group, dihydro-3H-benzothiazol-4-yl group,
quinolin-6-yl group, quinolin-3-yl group, quinolin-5-yl group, quinolin-7-yl group,
dihydro-1H-quinolin-6-yl group, dihydro-1H-quinolin-5-yl group,
benzo[d]isothiazol-5-yl group, benzo[d]isothiazol-4-yl group, benzo[d]isothiazol-6-yl
group, benzo[d]isothiazol-7-yl group, 1H-indazol-5-yl group, 1H-indazol-4-yl group,
1H-indazol-6-yl group, benzo[c]isothiazol-5-yl group, benzo[c]isothiazol-4-yl group,
benzo[c]isothiazol-6-yl group, benzo[c]isothiazol-7-yl group, 2H-indazol-5-yl group,
2H-indazol-4-yl group, 2H-indazol-6-yl group, imidazo[1,2-a]pyridin-6-yl group,
imidazo[1,2-a]pyridin-7-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group,
1H-pyrrolo[2,3-b]pyridin-4-yl group, isoquinolin-6-yl group, isoquinolin-3-yl group,
isoquinolin-5-yl group, isoquinolin-7-yl group, dihydro-2H-isoquinolin-6-yl group,
dihydro-2H-isoquinolin-5-yl group, cinnolin-6-yl group, cinnolin-5-yl group,
quiazolin-6-yl group, quiazolin-7-yl group, quiazolin-5-yl group, quinoxalin-2-yl
group, quinoxalin-6-yl group, quinoxalin-5-yl group, 1H-benzimidazol-5-yl group,
1H-benzimidazol-4-yl group, benzoxazol-5-yl group, benzoxazol-6-yl group,
benzoxazol-4-yl group, benzoxazol-7-yl group, 1H-pyrrolo[3,2-b]pyridin-5-yl group,
1H-pyrrolo[3,2-b]pyridin-6-yl group, benzo[1,2,5]thiadiazol-5-yl group,
benzo[1,2,5]thiadiazol-4-yl group, 1H-benzotriazol-5-yl group, 1H-benzotriazol-4-yl
group, 1,3-dihydropyrrolo[2,3-b]pyridin-5-yl group,
1,3-dihydropyrrolo[2,3-b]pyridin-4-yl group, 1,3-dihydrobenzimidazol-5-yl group,
1,3-dihydrobenzimidazol-4-yl group, dihydro-3H-benzoxazol-6-yl group,
dihydro-3H-benzoxazol-7-yl group, dihydro-3H-benzoxazol-5-yl group,

dihydro-3H-benzoxazol-4-yl group, phthalazin-6-yl group, phthalazin-5-yl group, [1,8]naphthalidin-3-yl group, [1,8]naphthalidin-4-yl group, [1,5]naphthalidin-3-yl group, [1,5]naphthalidin-4-yl group, 1H-pyrrolo[3,2-c]pyridin-6-yl group, 1H-pyrrolo[3,2-c]pyridin-4-yl group, 1H-pyrrolo[2,3-c]pyridin-5-yl group, 1H-pyrrolo[2,3-c]pyridin-4-yl group, 1H-pyrazolo[4,3-b]pyridin-5-yl group, 1H-pyrazolo[4,3-b]pyridin-6-yl group, 1H-pyrazolo[4,3-b]pyridin-6-yl group, 1H-pyrazolo[3,4-c]pyridin-4-yl group, 1H-pyrazolo[3,4-c]pyridin-5-yl group, 1H-pyrazolo[3,4-c]pyridin-4-yl group, 1H-pyrazolo[3,4-b]pyridin-5-yl group, 1H-pyrazolo[3,4-b]pyridin-6-yl group, [1,2,4]triazolo[4,3-a]pyridin-6-yl group, [1,2,4]triazolo[4,3-a]pyridin-7-yl group, thieno[3,2-c]pyridin-2-yl group, thieno[3,2-c]pyridin-3-yl group, thieno[3,2-b]pyridin-2-yl group, thieno[3,2-b]pyridin-3-yl group, thieno[3,2-b]pyridin-5-yl group, thieno[3,2-b]pyridin-6-yl group, 1H-thieno[3,2-c]pyrazol-5-yl group, 1H-thieno[3,2-c]pyrazol-4-yl group, benzo[d]isoxazol-5-yl group, benzo[d]isoxazol-4-yl group, benzo[d]isoxazol-6-yl group, benzo[d]isoxazol-7-yl group, benzo[c]isoxazol-5-yl group, benzo[c]isoxazol-4-yl group, benzo[c]isoxazol-6-yl group, benzo[c]isoxazol-7-yl group, indolizin-7-yl group, indolizin-6-yl group, indolizine-8-yl group, 1,3-dihydroindol-5-yl group, 1,3-dihydroindol-4-yl group, 1,3-dihydroindol-6-yl group, 1H-pyrazolo[3,4-d]thiazol-5-yl group, 2H-isoindol-5-yl group, 2H-isoindol-4-yl group, [1,2,4]triazolo[1,5-a]pyrimidin-6-yl group, 1H-pyrazolo[3,4-b]pyrazin-5-yl group, 1H-imidazo[4,5-b]pyrazin-5-yl group, 7H-purin-2-yl group, 4H-chromen-6-yl group, or 4H-chromen-5-yl group (these groups may be substituted with one of X_a or two or more of the same or different X_a). The substituent X_a represents a group as any one of oxo group, thioxo group, fluorine atom, chlorine atom, trifluoromethyl group, methyl group, ethyl group, propyl group, 2-hydroxyethyl group, carboxymethyl group, 2-carboxyethyl group, N,N-dimethylcarbamoylmethyl group, hydroxyl group,

methoxy group, 2-hydroxyethoxy group, carboxymethoxy group, 2-carboxyethoxy group, N,N-dimethylcarbamoylmethoxy group, amino group, methylamino group, dimethylamino group, 2-hydroxyethylamino group, carbamoylamino group, acetylamino group, furan-2-carboxyamino group, 2-hydroxyacetylamino group, 2-aminoacetylamino group, methylsulfonylamino group, (N,N-dimethylsulfamoyl)amino group, methanesulfonyl group, sulfamoyl group, N-methylsulfamoyl group, N,N-dimethylsulfamoyl group, carboxyl group, acetyl group, carbamoyl group, and N,N-dimethylcarbamoyl group.

The group Y represents hydrogen atom, methyl group, or ethyl group.

In another preferred embodiment of the present invention, the compound represented by the formula (I) or a salt thereof satisfies all of the following requirements.

Link represents $-(\text{CH}_2)_n-$, symbol n represents an integer of 1 to 3.

C³ represents carbon atom to which AR bonds, C⁴ represents carbon atom to which Rs bonds, C⁵ may be replaced with V, and C² and C⁶ represent unsubstituted ring constituting carbon atom.

V represents nitrogen atom, or carbon atom substituted with Zx, and Zx represents a group as any one of chlorine atom, bromine atom, nitro group, methyl group, hydroxyl group, methoxy group, amino group, N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino group, N,N-dimethylamino group, N,N-diethylamino group, formylamino group, acetylamino group, carbamoylamino group, mesylamino group, and N,N-dimethylsulfamoylamino group.

Rs represents -D-Rc , and D represents oxygen atom or sulfur atom. Symbol p in Rc represents an integer of 2 or 3, and A⁴ represents a single bond or methylene. A⁵ represents -C(O)- , -C(S)- , or -S(O)_2- . Rd represents hydrogen atom, or a group as any one of methyl group, ethyl group, propyl group, isopropyl group, butyl group,

isobutyl group, cyclopropyl group, cyclopropylmethyl group, cyclopentyl group, cyclopentylmethyl group, cyclohexyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, and pyridin-4-yl group. Re represents a group as any one of methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, cyclopentylmethyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, phenylmethyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, pyridin-4-yl group, furan-2-yl group, furan-3-yl group, thiophen-2-yl group, thiophen-3-yl group, methoxy group, ethoxy group, propyloxy group, isopropyloxy group, butyloxy group, isobutyloxy group, t-butyloxy group, cyclopropyloxy group, cyclopentyloxy group, cyclohexyloxy group, cyclopentylmethoxy group, cyclohexylmethoxy group, phenoxy group, 4-methylphenoxy group, 4-chlorophenoxy group, 4-fluorophenoxy group, thiomethoxy group, amino group, N-methylamino group, N,N-dimethylamino group, N-ethylamino group, N,N-diethylamino group, N-propylamino group, N-isopropylamino group, N-butylamino group, N-isobutylamino group, N-t-butylamino group, N-cyclopropylamino group, N-cyclopentylamino group, N-cyclohexylamino group, N-phenylamino group, N-(4-methylphenyl)amino group, N-(4-chlorophenyl)amino group, N-(4-fluorophenyl)amino group, N-(pyridin-2-yl)amino group, N-(pyridin-3-yl)amino group, N-(pyridin-4-yl)amino group, N-(furan-2-yl)amino group, N-(furan-3-yl)amino group, N-(thiophen-2-yl)amino group, N-(thiophen-3-yl)amino group, pyrrolidino group, piperidino group, morpholino group, methyloxycarbonylamino group, and ethyloxycarbonylamino group.

AR represents naphthalen-2-yl group, naphthalen-1-yl group,
benzofuran-5-yl group, benzofuran-4-yl group, benzofuran-2-yl group,
benzo[b]thiophen-5-yl group, benzo[b]thiophen-4-yl group, benzo[b]thiophen-2-yl
group, indol-5-yl group, indol-4-yl group, indol-6-yl group, benzothiazol-6-yl group,
benzothiazol-7-yl group, benzothiazol-5-yl group, benzothiazol-4-yl group,
dihydro-3H-benzothiazol-6-yl group, dihydro-3H-benzothiazol-7-yl group,
dihydro-3H-benzothiazol-5-yl group, dihydro-3H-benzothiazol-4-yl group,
quinolin-6-yl group, quinolin-3-yl group, quinolin-5-yl group, quinolin-7-yl group,
dihydro-1H-quinolin-6-yl group, dihydro-1H-quinolin-5-yl group,
benzo[d]isothiazol-5-yl group, benzo[d]isothiazol-4-yl group, benzo[d]isothiazol-6-yl
group, benzo[d]isothiazol-7-yl group, 1H-indazol-5-yl group, 1H-indazol-4-yl group,
1H-indazol-6-yl group, benzo[c]isothiazol-5-yl group, benzo[c]isothiazol-4-yl group,
benzo[c]isothiazol-6-yl group, benzo[c]isothiazol-7-yl group, 2H-indazol-5-yl group,
2H-indazol-4-yl group, 2H-indazol-6-yl group, imidazo[1,2-a]pyridin-6-yl group,
imidazo[1,2-a]pyridin-7-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group,
1H-pyrrolo[2,3-b]pyridin-4-yl group, isoquinolin-6-yl group, isoquinolin-3-yl group,
isoquinolin-5-yl group, isoquinolin-7-yl group, dihydro-2H-isoquinolin-6-yl group,
dihydro-2H-isoquinolin-5-yl group, cinnolin-6-yl group, cinnolin-5-yl group,
quinazolin-6-yl group, quinazolin-7-yl group, quinazolin-5-yl group, quinoxalin-2-yl
group, quinoxalin-6-yl group, quinoxalin-5-yl group, 1H-benzimidazol-5-yl group,
1H-benzimidazol-4-yl group, benzoxazol-5-yl group, benzoxazol-6-yl group,
benzoxazol-4-yl group, benzoxazol-7-yl group, 1H-pyrrolo[3,2-b]pyridin-5-yl group,
1H-pyrrolo[3,2-b]pyridin-6-yl group, benzo[1,2,5]thiadiazol-5-yl group,
benzo[1,2,5]thiadiazol-4-yl group, 1H-benzotriazol-5-yl group, 1H-benzotriazol-4-yl
group, 1,3-dihydropyrrolo[2,3-b]pyridin-5-yl group,
1,3-dihydropyrrolo[2,3-b]pyridin-4-yl group, 1,3-dihydrobenzimidazol-5-yl group,
1,3-dihydrobenzimidazol-4-yl group, dihydro-3H-benzoxazol-6-yl group,

dihydro-3H-benzoxazol-7-yl group, dihydro-3H-benzoxazol-5-yl group,
dihydro-3H-benzoxazol-4-yl group, phthalazin-6-yl group, phthalazin-5-yl group,
[1,8]naphthalidin-3-yl group, [1,8]naphthalidin-4-yl group, [1,5]naphthalidin-3-yl
group, [1,5]naphthalidin-4-yl group, 1H-pyrrolo[3,2-c]pyridin-6-yl group,
1H-pyrrolo[3,2-c]pyridin-4-yl group, 1H-pyrrolo[2,3-c]pyridin-5-yl group,
1H-pyrrolo[2,3-c]pyridin-4-yl group, 1H-pyrazolol[4,3-b]pyridin-5-yl group,
1H-pyrazolo[4,3-b]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-6-yl group,
1H-pyrazolo[4,3-c]pyridin-4-yl group, 1H-pyrazolo[3,4-c]pyridin-5-yl group,
1H-pyrazolo[3,4-c]pyridin-4-yl group, 1H-pyrazolo[3,4-b]pyridin-5-yl group,
1H-pyrazolo[3,4-b]pyridin-4-yl group, [1,2,4]triazolo[4,3-a]pyridin-6-yl group,
[1,2,4]triazolo[4,3-a]pyridin-7-yl group, thieno[3,2-c]pyridin-2-yl group,
thieno[3,2-c]pyridin-3-yl group, thieno[3,2-c]pyridin-6-yl group,
thieno[3,2-b]pyridin-2-yl group, thieno[3,2-b]pyridin-3-yl group,
thieno[3,2-b]pyridin-5-yl group, thieno[3,2-b]pyridin-6-yl group,
1H-thieno[3,2-c]pyrazol-5-yl group, 1H-thieno[3,2-c]pyrazol-4-yl group,
benzo[d]isoxazol-5-yl group, benzo[d]isoxazol-4-yl group, benzo[d]isoxazol-6-yl group,
benzo[d]isoxazol-7-yl group, benzo[c]isoxazol-5-yl group, benzo[c]isoxazol-4-yl group,
benzo[c]isoxazol-6-yl group, benzo[c]isoxazol-7-yl group, indolizin-7-yl group,
indolizin-6-yl group, indolizine-8-yl group, 1,3-dihydroindol-5-yl group,
1,3-dihydroindol-4-yl group, 1,3-dihydroindol-6-yl group,
1H-pyrazolo[3,4-d]thiazol-5-yl group, 2H-isoindol-5-yl group, 2H-isoindol-4-yl group,
[1,2,4]triazolo[1,5-a]pyrimidin-6-yl group, 1H-pyrazolo[3,4-b]pyrazin-5-yl group,
1H-imidazo[4,5-b]pyrazin-5-yl group, 7H-purin-2-yl group, 4H-chromen-6-yl group,
or 4H-chromen-5-yl group (these groups may be substituted with one of Xa or two or
more of the same or different Xa). The substituent Xa represents a group as any
one of oxo group, thioxo group, fluorine atom, chlorine atom, trifluoromethyl group,
methyl group, ethyl group, propyl group, 2-hydroxyethyl group, carboxymethyl

group, 2-carboxyethyl group, N,N-dimethylcarbamoylmethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, carboxymethoxy group, 2-carboxyethoxy group, N,N-dimethylcarbamoylmethoxy group, amino group, methylamino group, dimethylamino group, 2-hydroxyethylamino group, carbamoylamino group, acetylamino group, furan-2-carboxyamino group, 2-hydroxyacetylamino group, 2-aminoacetylamino group, methylsulfonylamino group, (N,N-dimethylsulfamoyl)amino group, methanesulfonyl group, sulfamoyl group, N-methylsulfamoyl group, N,N-dimethylsulfamoyl group, carboxyl group, acetyl group, carbamoyl group, and N,N-dimethylcarbamoyl group.

The group Y represents hydrogen atom, methyl group, or ethyl group.

In another preferred embodiment of the present invention, the compound represented by the formula (I) or a salt thereof satisfies all of the following requirements.

Link is $\cdot(\text{CH}_2)_n\cdot$, n is an integer of 1 to 3, C³ is carbon atom bound with AR, C⁴ is carbon atom bound with Rs, C⁵ may be replaced with V, C² and C⁶ are unsubstituted ring constituting carbon atoms,

V is nitrogen atom or V is carbon atom substituted with Zx, Zx is any one of fluorine atom, methyl group, hydroxyl group, amino group, N-methylamino group, or N,N-dimethylamino group,

Rs is $\cdot\text{D}\text{-Rx}$, D is a single bond, Rx is butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-cyclopentylethyl group, or 2-cyclohexylethyl group, or Rx is Rb or Rc (provided that Q in Rb is phenyl group, thiienyl group, furyl group, pyridyl group, oxazolyl group, naphthyl group, tetrahydronaphthyl group, indanyl group, indolyl group, or dihydrobenzodioxyl group), A² is a single bond, oxygen atom, sulfur atom, $\cdot\text{N}(\text{methyl})\cdot$, or $\cdot\text{N}(\text{ethyl})\cdot$ (provided that when A² represents oxygen atom, sulfur atom, $\cdot\text{N}(\text{methyl})\cdot$ or

-N(ethyl)-, A¹ represents ethylene), R² and R³ independently represent hydrogen atom, methyl group, fluorine atom, chlorine atom, trifluoromethyl group, methoxy group, dimethylamino group, acetyl amino group, or methylsulfonyl amino group, p in R_c is an integer of 2 or 3, A⁴ is a single bond or methylene, A⁵ is -C(O)-, -C(S)-, or -S(O)₂-, R_d is hydrogen atom, or methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, cyclopropyl group, cyclopropylmethyl group, cyclopentyl group, cyclopentylmethyl group, cyclohexyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, or pyridin-4-yl group, R_e is methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, t-butyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, cyclopentylmethyl group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, phenylmethyl group, 4-chlorophenylmethyl group, 4-fluorophenylmethyl group, pyridin-2-yl group, pyridin-3-yl group, pyridin-4-yl group, methoxy group, ethoxy group, propoxy group, isopropoxy group, butyloxy group, isobutyloxy group, t-butyloxy group, cyclopropoxy group, cyclopentyloxy group, cyclohexyloxy group, cyclopentylmethoxy group, cyclohexylmethoxy group, phenoxy group, 4-methylphenoxy group, 4-chlorophenoxy group, 4-fluorophenoxy group, thiomethoxy group, amino group, N-methylamino group, N,N-dimethylamino group, N-ethylamino group, N,N-diethylamino group, N-propylamino group, N-isopropylamino group, N-butylamino group, N-isobutylamino group, N-t-butylamino group, N-cyclopropylamino group, N-cyclopentylamino group, N-cyclohexylamino group, N-phenylamino group, N-(4-methylphenyl)amino group, N-(4-chlorophenyl)amino group, N-(4-fluorophenyl)amino group, N-(pyridin-2-yl)amino group, N-(pyridin-3-yl)amino group, N-(pyridin-4-yl)amino group, N-(furan-2-yl)amino group, N-(furan-3-yl)amino

group, N-(thiophen-2-yl)amino group, N-(thiophen-3-yl)amino group, pyrrolidino group, piperidino group, morpholino group, methyloxycarbonylamino group, or ethyloxycarbonylamino group,

AR is naphthalen-2-yl group, naphthalen-1-yl group, benzofuran-5-yl group, benzofuran-4-yl group, benzofuran-2-yl group, benzo[b]thiophen-5-yl group, benzo[b]thiophen-4-yl group, benzo[b]thiophen-2-yl group, indol-5-yl group, indol-4-yl group, indol-6-yl group, benzothiazol-6-yl group, benzothiazol-7-yl group, benzothiazol-5-yl group, benzothiazol-4-yl group, dihydro-3H-benzothiazol-6-yl group, dihydro-3H-benzothiazol-7-yl group, dihydro-3H-benzothiazol-5-yl group, dihydro-3H-benzothiazol-4-yl group, quinolin-6-yl group, quinolin-3-yl group, quinolin-5-yl group, quinolin-7-yl group, dihydro-1H-quinolin-6-yl group, dihydro-1H-quinolin-5-yl group, benzo[d]isothiazol-5-yl group, benzo[d]isothiazol-4-yl group, benzo[d]isothiazol-6-yl group, benzo[d]isothiazol-7-yl group, 1H-indazol-5-yl group, 1H-indazol-4-yl group, 1H-indazol-6-yl group, benzo[c]isothiazol-5-yl group, benzo[c]isothiazol-4-yl group, benzo[c]isothiazol-6-yl group, benzo[c]isothiazol-7-yl group, 2H-indazol-5-yl group, 2H-indazol-4-yl group, 2H-indazol-6-yl group, imidazo[1,2-a]pyridin-6-yl group, imidazo[1,2-a]pyridin-7-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group, 1H-pyrrolo[2,3-b]pyridin-4-yl group, isoquinolin-6-yl group, isoquinolin-3-yl group, isoquinolin-5-yl group, isoquinolin-7-yl group, dihydro-2H-isoquinolin-6-yl group, dihydro-2H-isoquinolin-5-yl group, cinnolin-6-yl group, cinnolin-5-yl group, quinazolin-6-yl group, quinazolin-7-yl group, quinazolin-5-yl group, quinoxalin-2-yl group, quinoxalin-6-yl group, quinoxalin-5-yl group, 1H-benzimidazol-5-yl group, 1H-benzimidazol-4-yl group, benzoxazol-5-yl group, benzoxazol-6-yl group, benzoxazol-4-yl group, benzoxazol-7-yl group, 1H-pyrrolo[3,2-b]pyridin-5-yl group, 1H-pyrrolo[3,2-b]pyridin-6-yl group, benzo[1,2,5]thiadiazol-5-yl group, benzo[1,2,5]thiadiazol-4-yl group, 1H-benzotriazol-5-yl group, 1H-benzotriazol-4-yl

group, 1,3-dihydropyrrolo[2,3-b]pyridin-5-yl group,
1,3-dihydropyrrolo[2,3-b]pyridin-4-yl group, 1,3-dihydrobenzimidazol-5-yl group,
1,3-dihydrobenzimidazol-4-yl group, dihydro-3H-benzoxazol-6-yl group,
dihydro-3H-benzoxazol-7-yl group, dihydro-3H-benzoxazol-5-yl group,
dihydro-3H-benzoxazol-4-yl group, phthalazin-6-yl group, phthalazin-5-yl group,
[1,8]naphthalidin-3-yl group, [1,8]naphthalidin-4-yl group, [1,5]naphthalidin-3-yl
group, [1,5]naphthalidin-4-yl group, 1H-pyrrolo[3,2-c]pyridin-6-yl group,
1H-pyrrolo[3,2-c]pyridin-4-yl group, 1H-pyrrolo[2,3-c]pyridin-5-yl group,
1H-pyrrolo[2,3-c]pyridin-4-yl group, 1H-pyrazolo[4,3-b]pyridin-5-yl group,
1H-pyrazolo[4,3-b]pyridin-6-yl group, 1H-pyrazolo[4,3-c]pyridin-6-yl group,
1H-pyrazolo[4,3-c]pyridin-4-yl group, 1H-pyrazolo[3,4-c]pyridin-5-yl group,
1H-pyrazolo[3,4-c]pyridin-4-yl group, 1H-pyrazolo[3,4-b]pyridin-5-yl group,
1H-pyrazolo[3,4-b]pyridin-4-yl group, [1,2,4]triazolo[4,3-a]pyridin-6-yl group,
[1,2,4]triazolo[4,3-a]pyridin-7-yl group, thieno[3,2-c]pyridin-2-yl group,
thieno[3,2-c]pyridin-3-yl group, thieno[3,2-c]pyridin-6-yl group,
thieno[3,2-b]pyridin-2-yl group, thieno[3,2-b]pyridin-3-yl group,
thieno[3,2-b]pyridin-5-yl group, thieno[3,2-b]pyridin-6-yl group,
1H-thieno[3,2-c]pyrazol-5-yl group, 1H-thieno[3,2-c]pyrazol-4-yl group,
benzo[d]isoxazol-5-yl group, benzo[d]isoxazol-4-yl group, benzo[d]isoxazol-6-yl group,
benzo[d]isoxazol-7-yl group, benzo[c]isoxazol-5-yl group, benzo[c]isoxazol-4-yl group,
benzo[c]isoxazol-6-yl group, benzo[c]isoxazol-7-yl group, indolizin-7-yl group,
indolizin-6-yl group, indolizine-8-yl group, 1,3-dihydroindol-5-yl group,
1,3-dihydroindol-4-yl group, 1,3-dihydroindol-6-yl group,
1H-pyrazolo[3,4-d]thiazol-5-yl group, 2H-isoindol-5-yl group, 2H-isoindol-4-yl group,
[1,2,4]triazolo[1,5-a]pyrimidin-6-yl group, 1H-pyrazolo[3,4-b]pyrazin-5-yl group,
1H-imidazo[4,5-b]pyrazin-5-yl group, 7H-purin-2-yl group, 4H-chromen-6-yl group,
or 4H-chromen-5-yl group (the aforementioned groups may be substituted with one

of Xa or two or more of the same or different Xa), Xa is oxo group, thioxo group, fluorine atom, chlorine atom, trifluoromethyl group, methyl group, ethyl group, propyl group, 2-hydroxyethyl group, carboxymethyl group, 2-carboxyethyl group, N,N-dimethylcarbamoylmethyl group, hydroxyl group, methoxy group, 2-hydroxyethoxy group, carboxymethoxy group, 2-carboxyethoxy group, N,N-dimethylcarbamoylmethoxy group, amino group, methylamino group, dimethylamino group, 2-hydroxyethylamino group, carbamoylamino group, acetylamino group, furan-2-carboxyamino group, 2-hydroxyacetylamino group, 2-aminoacetylamino group, methylsulfonylamino group, (N,N-dimethylsulfamoyl)amino group, methanesulfonyl group, sulfamoyl group, N-methylsulfamoyl group, N,N-dimethylsulfamoyl group, carboxyl group, acetyl group, carbamoyl group, or N,N-dimethylcarbamoyl group, and

Y is hydrogen atom, methyl group, or ethyl group.

In a particularly preferred embodiment of the present invention, the compound represented by the formula (I) or a salt thereof satisfies all of the following requirements.

Link represents -(CH₂)_n, symbol n represents an integer of 2.

C² represents carbon atom to which AR bonds, C³ represents carbon atom to which Rs bonds, C⁴ may be replaced with V, and C⁵ and C⁶ represent unsubstituted ring-constituting carbon atom.

V represents nitrogen atom, or carbon atom substituted with Zx, and Zx represents a group as any one of fluorine atom, methyl group, hydroxyl group, amino group, N-methylamino group, and N,N-dimethylamino group.

Rs represents -O-Rx. Rx represents a group as any one of butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl

group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group, 2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group, 2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group, 2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group, 2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group,

2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group,
2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group,
2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group,
2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group,
2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group,
2-(N-phenyl-N-methylamino)ethyl group, and 2-(N-ethyl-N-phenylamino)ethyl
group.

AR represents a group as any one of naphthalen-2-yl group,
6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group,
6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group,
6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl
group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group,
2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group,
2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group,
2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group,
2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group,
2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group,
2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group,
1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group,
1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group,
1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group,
1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group,
2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group,
2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group,
1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group,
1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group,
2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group,

2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group,
2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group,
2-oxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group,
2-thioxo-2,3-dihydrobenzothiazol-6-yl group,
2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group,
quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl
group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group,
1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group,
1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group,
3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group,
imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group,
1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl
group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group,
1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group,
1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, and benzoxazol-5-yl
group.

The group Y represents hydrogen atom, methyl group, or ethyl group.

In another particularly preferred embodiment of the present invention, the compound represented by the formula (I) or a salt thereof satisfies all of the following requirements.

Link represents -(CH₂)_n, symbol n represents an integer of 2.

C² represents carbon atom to which AR bonds, C⁴ represents carbon atom to which Rs bonds, C⁶ may be replaced with V, and C⁸ and C⁶ represent unsubstituted ring-constituting carbon atom.

V represents nitrogen atom, or carbon atom substituted with Zx, and Zx represents a group as any one of fluorine atom, methyl group, hydroxyl group, amino group, N-methylamino group, and N,N-dimethylamino group.

Rs represents -O-Rx. Rx represents a group as any one of butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group, 2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group, 4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group, 2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group,

2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group,
2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group,
2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group,
2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group,
2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group,
2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group,
2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group,
2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group,
2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group,
2-(N-phenyl-N-methylamino)ethyl group, and 2-(N-ethyl-N-phenylamino)ethyl
group.

AR represents a group as any one of naphthalen-2-yl group,
6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group,
6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group,
6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl
group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzof[b]furan-5-yl group,
2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group,
2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group,
2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group,
2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group,
2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group,
2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group,
1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group,
1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group,
1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group,
1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group,
2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group,

2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group,
1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group,
1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group,
2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group,
2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group,
2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group,
2-oxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group,
2-thioxo-2,3-dihydrobenzothiazol-6-yl group,
2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group,
quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl
group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group,
1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group,
1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group,
3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group,
imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group,
1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl
group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group,
1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group,
1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, and benzoxazol-5-yl
group.

The group Y represents hydrogen atom, methyl group, or ethyl group.

In another particularly preferred embodiment of the present invention, the compound represented by the formula (I) or a salt thereof satisfies all of the following requirements.

Link represents -(CH₂)_n, symbol n represents an integer of 2.

C^3 represents carbon atom to which AR bonds, C^5 represents carbon atom to which Rs bonds, and C^2 , C^4 and C^6 represent unsubstituted ring-constituting carbon atom.

Rs represents -O-Rx. Rx represents a group as any one of butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group, 3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group,

2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group,
4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group,
2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group,
2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group,
2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group,
2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group,
2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group,
2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group,
2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group,
2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group,
2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group,
2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group,
2-(N-phenyl-N-methylamino)ethyl group, and 2-(N-ethyl-N-phenylamino)ethyl
group.

AR represents a group as any one of naphthalen-2-yl group,
6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group,
6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group,
6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl
group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group,
2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group,
2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group,
2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group,
2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group,
2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group,
2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group,
1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group,
1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group,

1·ethyl-2·methyl-1H-indol-5·yl group, 1·ethyl-3·methyl-1H-indol-5·yl group,
1·ethyl-2,3-dimethyl-1H-indol-5·yl group, 1·propyl-1H-indol-5·yl group,
2·methyl-1·propyl-1H-indol-5·yl group, 3·methyl-1·propyl-1H-indol-5·yl group,
2,3-dimethyl-1·propyl-1H-indol-5·yl group, 1-(2-hydroxyethyl)-1H-indol-5·yl group,
1-(2-hydroxyethyl)-2-methyl-1H-indol-5·yl group,
1-(2-hydroxyethyl)-3-methyl-1H-indol-5·yl group,
2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5·yl group, benzothiazol-6·yl group,
2-methylbenzothiazol-6·yl group, 2-methoxybenzothiazol-6·yl group,
2-aminobenzothiazol-6·yl group, 2-oxo-2,3-dihydrobenzothiazol-6·yl group,
2-oxo-3-methyl-2,3-dihydrobenzothiazol-6·yl group,
2-thioxo-2,3-dihydrobenzothiazol-6·yl group,
2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6·yl group, quinolin-3·yl group,
quinolin-6·yl group, 2-oxo-1,2-dihydroquinolin-6·yl group, benzodjisolothiazol-5·yl
group, 1H-indazol-5·yl group, 1-methyl-1H-indazol-5·yl group,
1-ethyl-1H-indazol-5·yl group, 1-propyl-1H-indazol-5·yl group,
1-(2-hydroxyethyl)-1H-indazol-5·yl group, 3-hydroxy-1H-indazol-5·yl group,
3-hydroxy-1-methyl-1H-indazol-5·yl group, 1-ethyl-3-hydroxy-1H-indazol-5·yl group,
imidazo[1,2-a]pyridin-6·yl group, 1H-pyrrolo[2,3-b]pyridin-5·yl group,
1-methyl-1H-pyrrolo[2,3-b]pyridin-5·yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5·yl
group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5·yl group,
1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5·yl group, isoquinolin-6·yl group,
1-oxo-1,2-dihydroisoquinolin-6·yl group, cinnolin-6·yl group, and benzoxazol-5·yl
group.

The group Y represents hydrogen atom, methyl group, or ethyl group.

In another particularly preferred embodiment of the present invention, the compound represented by the formula (I) or a salt thereof satisfies all of the following requirements.

Link represents $-(\text{CH}_2)_n-$, symbol n represents an integer of 2.

C^3 represents carbon atom to which AR bonds, C^4 represents carbon atom to which Rs bonds, C^5 represents nitrogen atom, and C^2 and C^6 represent unsubstituted ring constituting carbon atom.

Rs represents $\text{O}-\text{Rx}$. Rx represents a group as any one of butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group, 3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group, 2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group, 2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group,

3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group,
2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group,
4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group,
2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group,
2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group,
2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group,
2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group,
2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group,
2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group,
2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group,
2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group,
2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group,
2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group,
2-(N-phenyl-N-methylamino)ethyl group, and 2-(N-ethyl-N-phenylamino)ethyl
group.

AR represents a group as any one of naphthalen-2-yl group,
6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group,
6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group,
6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl
group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group,
2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group,
2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group,
2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group,
2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group,
2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group,
2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group,
1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group,

1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group,
1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group,
1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group,
2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group,
2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group,
1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group,
1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group,
2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group,
2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group,
2-aminothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group,
2-oxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group,
2-thioxo-2,3-dihydrobenzothiazol-6-yl group,
2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group,
quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl
group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group,
1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group,
1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group,
3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group,
imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group,
1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl
group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group,
1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group,
1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, and benzoxazol-5-yl
group.

The group Y represents hydrogen atom, methyl group, or ethyl group.

In another preferred embodiment of the present invention, the compound
represented by the formula (I) or a salt thereof satisfies all of the following

requirements.

Link represents -(CH₂)_n, symbol n represents an integer of 2.

C³ represents carbon atom to which AR bonds, C⁴ represents carbon atom to which Rs bonds, C⁶ represents carbon atom substituted with Zx, and C² and C⁵ represent unsubstituted ring-constituting carbon atom.

Zx represents fluorine atom, methyl group, hydroxyl group, amino group, N-methylamino group, or N,N-dimethylamino group.

Rs represents -O-Rx. Rx represents a group as any one of butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group, 2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group,

3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group,
2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group,
2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group,
3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group,
2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group,
4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group,
2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group,
2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group,
2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group,
2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group,
2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group,
2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group,
2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group,
2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group,
2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group,
2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group,
2-(N-phenyl-N-methylamino)ethyl group, and 2-(N-ethyl-N-phenylamino)ethyl
group.

AR represents a group as any one of naphthalen-2-yl group,
6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group,
6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group,
6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl
group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group,
2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group,
2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group,
2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group,
2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group,

2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group,
2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group,
1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group,
1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group,
1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group,
1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group,
2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group,
2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group,
1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group,
1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group,
2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group,
2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group,
2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group,
2-oxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group,
2-thioxo-2,3-dihydrobenzothiazol-6-yl group,
2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group,
quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl
group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group,
1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group,
1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group,
3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group,
imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group,
1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl
group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group,
1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group,
1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, and benzoxazol-5-yl
group.

The group Y represents hydrogen atom, methyl group, or ethyl group.

In another particularly preferred embodiment of the present invention, the compound represented by the formula (I) or a salt thereof satisfies all of the following requirements.

Link represents $-(\text{CH}_2)_n-$, symbol n represents an integer of 2.

C^3 represents carbon atom to which AR bonds, C^4 represents carbon atom to which Rs bonds, and C^2 , C^5 and C^6 represent unsubstituted ring-constituting carbon atom.

Rs represents $\text{-N}(\text{Ry})(\text{Rz})$. Rz represents a group as any one of butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group, 2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group, 2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group, 4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group,

2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group,
3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group,
2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group,
2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group,
3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group,
2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group,
4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group,
2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group,
2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group,
2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group,
2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group,
2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group,
2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group,
2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group,
2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group,
2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group,
2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group,
2-(N-phenyl-N-methylamino)ethyl group, 2-(N-ethyl-N-phenylamino)ethyl group,
isobutyryl group, isopropylthiocarbonyl group, isopropylsulfonyl group, valeryl
group, butylthiocarbonyl group, isovaleryl group, isobutylthiocarbonyl group,
pivaloyl group, t-butylthiocarbonyl group, cyclopropylcarbonyl group,
cyclopropylthiocarbonyl group, cyclopentylcarbonyl group, cyclopentylthiocarbonyl
group, cyclohexylcarbonyl group, cyclohexylthiocarbonyl group,
cyclopentylmethylecarbonyl group, cyclopentylmethylethiocarbonyl group,
cyclohexylmethylecarbonyl group, cyclohexylmethylethiocarbonyl group, benzoyl
group, thiobenzoyl group, phenylsulfonyl group, 4-methylphenylcarbonyl group,
4-methylphenylthiocarbonyl group, 4-methylphenylsulfonyl group,

4-chlorophenylcarbonyl group, 4-chlorophenylthiocarbonyl group,
4-fluorophenylcarbonyl group, 4-fluorophenylthiocarbonyl group,
isopropoxy carbonyl group, N-isopropylcarbamoyl group, N-isopropylthiocarbamoyl
group, butyloxycarbonyl group, N-butyloxycarbonyl group, N-butyloxycarbonyl
group, isobutyloxycarbonyl group, N-isobutyloxycarbonyl group,
N-isobutylthiocarbamoyl group, t-butyloxycarbonyl group, N-t-butyloxycarbonyl
group, N-t-butyloxycarbonyl group, cyclopropoxycarbonyl group,
N-cyclopropylcarbamoyl group, N-cyclopropylthiocarbamoyl group,
cyclopentyloxycarbonyl group, N-cyclopentyloxycarbonyl group,
N-cyclopentylthiocarbamoyl group, cyclohexyloxycarbonyl group,
N-cyclohexylcarbamoyl group, N-cyclohexylthiocarbamoyl group,
cyclopentylmethyloxycarbonyl group, cyclohexylmethyloxycarbonyl group,
phenyloxycarbonyl group, N-phenylcarbamoyl group, N-phenylthiocarbamoyl group,
4-methylphenyloxycarbonyl group, N-(4-methylphenyl)carbamoyl group,
N-(4-methylphenyl)thiocarbamoyl group, 4-chlorophenyloxycarbonyl group,
N-(4-chlorophenyl)carbamoyl group, N-(4-chlorophenyl)thiocarbamoyl group,
4-fluorophenyloxycarbonyl group, N-(4-fluorophenyl)carbamoyl group,
N-(4-fluorophenyl)thiocarbamoyl group, (pyrrolidino-1-yl)carbonyl group,
(piperidino-1-yl)carbonyl group, and (morpholino-4-yl)carbonyl group. Ry
represents hydrogen atom, methyl group, ethyl group, or isobutyl group, or binds to
Rz to form pyrrolidino group, piperidino group, or morpholino group together with
nitrogen atom to which they bonds.

AR represents a group as any one of naphthalen-2-yl group,
6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group,
6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group,
6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl
group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group,

2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group,
2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group,
2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group,
2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group,
2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group,
2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group,
1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group,
1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group,
1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group,
1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group,
2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group,
2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group,
1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group,
1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group,
2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group,
2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group,
2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group,
2-oxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group,
2-thioxo-2,3-dihydrobenzothiazol-6-yl group,
2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group,
quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzoldisothiazol-5-yl
group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group,
1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group,
1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group,
3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group,
imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group,
1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl

group, 1-propyl-1*H*-pyrrolo[2,3-*b*]pyridin-5-yl group,
1-(2-hydroxyethyl)-1*H*-pyrrolo[2,3-*b*]pyridin-5-yl group, isoquinolin-6-yl group,
1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, and benzoxazol-5-yl
group.

The group Y represents hydrogen atom, methyl group, or ethyl group.

In another particularly preferred embodiment of the present invention, the compound represented by the formula (I) or a salt thereof satisfies all of the following requirements.

Link represents -(CH₂)_n-, symbol n represents an integer of 2.

C³ represents carbon atom to which AR bonds, C⁴ represents carbon atom to which Rs bonds, and C², C⁵ and C⁶ represent unsubstituted ring-constituting carbon atom.

Rs represents -N(Ry)(Rz). -N(Ry)(Rz) is any one of N,N-dimethylamino group, N-ethyl-N-methylamino group, N,N-diethylamino group, N-methyl-N-propylamino group, N-ethyl-N-propylamino group, N-isopropyl-N-methylamino group, N-ethyl-N-isopropylamino group, N-butylamino group, N-butyl-N-methylamino group, N-butyl-N-ethylamino group, N-isobutylamino group, N-isobutyl-N-methylamino group, N-ethyl-N-isobutylamino group, N-(2-ethylbutyl)amino group, N-(2-ethylbutyl)-N-methylamino group, N-cyclopentylamino group, N-cyclopentyl-N-methylamino group, N-cyclohexylamino group, N-cyclohexyl-N-methylamino group, N-cycloheptyl-amino group, N-(cyclopentylmethyl)amino group, N-(cyclopentylmethyl)-N-methylamino group, N-(cyclohexylmethyl)amino group, N-(cyclohexylmethyl)-N-methylamino group, N-(2-methylphenyl)amino group, N-(4-methylphenyl)amino group, N-(2-fluorophenyl)amino group, N-(3-fluorophenyl)amino group, N-(4-fluorophenyl)amino group, N-(2-chlorophenyl)amino group, N-(3-chlorophenyl)amino group, N-(4-chlorophenyl)amino group,

N-(indan-2-yl)amino group, N-(1-phenylethyl)amino group,
N-[1-(2-fluorophenyl)ethyl]amino group, N-[1-(3-fluorophenyl)ethyl]amino group,
N-[1-(4-fluorophenyl)ethyl]amino group, N-[1-(2-chlorophenyl)ethyl]amino group,
N-[1-(3-chlorophenyl)ethyl]amino group, N-[1-(4-chlorophenyl)ethyl]amino group,
N-(2-methylphenylmethyl)amino group, N-methyl-N-(2-methylphenylmethyl)amino
group, N-(3-methylphenylmethyl)amino group,
N-methyl-N-(3-methylphenylmethyl)amino group, N-(4-methylphenylmethyl)amino
group, N-methyl-N-(4-methylphenylmethyl)amino group,
N-(2-fluorophenylmethyl)amino group, N-(2-fluorophenylmethyl)-N-methylamino
group, N-(3-fluorophenylmethyl)amino group,
N-(3-fluorophenylmethyl)-N-methylamino group, N-(4-fluorophenylmethyl)amino
group, N-(4-fluorophenylmethyl)-N-methylamino group,
N-(2-chlorophenylmethyl)amino group, N-(2-chlorophenylmethyl)-N-methylamino
group, N-(3-chlorophenylmethyl)amino group,
N-(3-chlorophenylmethyl)-N-methylamino group, N-(4-chlorophenylmethyl)amino
group, N-(4-chlorophenylmethyl)-N-methylamino group,
N-(2,3-difluorophenylmethyl)amino group,
N-(2,3-difluorophenylmethyl)-N-methylamino group,
N-(2,4-difluorophenylmethyl)amino group,
N-(2,4-difluorophenylmethyl)-N-methylamino group,
N-(2,5-difluorophenylmethyl)amino group,
N-(2,5-difluorophenylmethyl)-N-methylamino group,
N-(3,4-difluorophenylmethyl)amino group,
N-(3,4-difluorophenylmethyl)-N-methylamino group,
N-(3,5-difluorophenylmethyl)amino group,
N-(3,5-difluorophenylmethyl)-N-methylamino group,
N-(2,3-dichlorophenylmethyl)amino group,

N-(2,3-dichlorophenylmethyl)-N-methylamino group,
N-(2,4-dichlorophenylmethyl)amino group,
N-(2,4-dichlorophenylmethyl)-N-methylamino group,
N-(2,5-dichlorophenylmethyl)amino group,
N-(2,5-dichlorophenylmethyl)-N-methylamino group,
N-(2,6-dichlorophenylmethyl)amino group,
N-(3,4-dichlorophenylmethyl)amino group,
N-(3,4-dichlorophenylmethyl)-N-methylamino group,
N-(3,5-dichlorophenylmethyl)amino group,
N-(3,5-dichlorophenylmethyl)-N-methylamino group,
N-[2-(trifluoromethyl)phenylmethyl]amino group,
N-methyl-N-[2-(trifluoromethyl)phenylmethyllamino group,
N-[3-(trifluoromethyl)phenylmethyllamino group,
N-methyl-N[3-(trifluoromethyl)phenylmethyllamino group,
N-[4-(trifluoromethyl)phenylmethyllamino group,
N-methyl-N-[4-(trifluoromethyl)phenylmethyllamino group, 1-pyrrolidino group,
1-(4-methylpiperidino) group, 1-homopiperidino group, or 4-morpholino group,
AR is naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group,
6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group,
6-aminonaphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group,
6-(N,N-dimethylamino)naphthalen-2-yl group,
6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group,
2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group,
2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group,
2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group,
2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group,

2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group,
2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group,
1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group,
1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group,
1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group,
1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group,
2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group,
2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group,
1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group,
1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group,
2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group,
2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group,
2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group,
2-oxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group,
2-thioxo-2,3-dihydrobenzothiazol-6-yl group,
2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group,
quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl
group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group,
1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group,
1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group,
3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group,
imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group,
1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl
group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group,
1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group,
1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, or benzoxazol-5-yl
group, and

Y is hydrogen atom, methyl group, or ethyl group.

In another particularly preferred embodiment of the present invention, the compound represented by the formula (I) or a salt thereof satisfies all of the following requirements.

Link represents -(CH₂)_n, symbol n represents an integer of 2.

C³ represents carbon atom to which AR bonds, C⁴ represents carbon atom to which Rs bonds, C⁵ represents carbon atom substituted with Zx, and C² and C⁶ represent unsubstituted ring-constituting carbon atom.

Zx represents N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino group, N,N-dimethylamino group, N,N-diethylamino group, formylamino group, acetylamino group, carbamoylamino group, mesylamino group, and N,N-dimethylsulfamoylamino group.

Rs represents -O-Rx. Rx represents a group as any one of butyl group, isobutyl group, 2-ethylbutyl group, cyclopentyl group, cyclohexyl group, cycloheptyl group, cyclopentylmethyl group, cyclohexylmethyl group, 2-methylphenyl group, 4-methylphenyl group, 2-fluorophenyl group, 3-fluorophenyl group, 4-fluorophenyl group, 2-chlorophenyl group, 3-chlorophenyl group, 4-chlorophenyl group, indan-2-yl group, 4-methylindan-2-yl group, 5-methylindan-2-yl group, 4,7-dimethylindan-2-yl group, 5,6-dimethylindan-2-yl group, 4-fluoroindan-2-yl group, 5-fluoroindan-2-yl group, 4,7-difluoroindan-2-yl group, 5,6-difluoroindan-2-yl group, 4-chloroindan-2-yl group, 5-chloroindan-2-yl group, 4,7-dichloroindan-2-yl group, 5,6-dichloroindan-2-yl group, 4-methoxyindan-2-yl group, 5-methoxyindan-2-yl group, 4,7-dimethoxyindan-2-yl group, 5,6-dimethoxyindan-2-yl group, 1-phenylethyl group, 1-(2-fluorophenyl)ethyl group, 1-(3-fluorophenyl)ethyl group, 1-(4-fluorophenyl)ethyl group, 1-(2-chlorophenyl)ethyl group, 1-(3-chlorophenyl)ethyl group, 1-(4-chlorophenyl)ethyl group, 2-methylphenylmethyl group, 3-methylphenylmethyl group, 4-methylphenylmethyl group,

2,3-dimethylphenylmethyl group, 3,5-dimethylphenylmethyl group,
2-fluorophenylmethyl group, 3-fluorophenylmethyl group, 4-fluorophenylmethyl
group, 2-chlorophenylmethyl group, 3-chlorophenylmethyl group,
4-chlorophenylmethyl group, 2,3-difluorophenylmethyl group,
2,4-difluorophenylmethyl group, 2,5-difluorophenylmethyl group,
3,4-difluorophenylmethyl group, 2,3-dichlorophenylmethyl group,
2,4-dichlorophenylmethyl group, 2,5-dichlorophenylmethyl group,
2,6-dichlorophenylmethyl group, 3,4-dichlorophenylmethyl group,
3,5-dichlorophenylmethyl group, 3,6-dichlorophenylmethyl group,
2-(trifluoromethyl)phenylmethyl group, 3-(trifluoromethyl)phenylmethyl group,
4-(trifluoromethyl)phenylmethyl group, 2-(2-methylphenyl)ethyl group,
2-(3-methylphenyl)ethyl group, 2-(4-methylphenyl)ethyl group,
2-(2-methoxyphenyl)ethyl group, 2-(3-methoxyphenyl)ethyl group,
2-(4-methoxyphenyl)ethyl group, 2-(2-fluorophenyl)ethyl group,
2-(3-fluorophenyl)ethyl group, 2-(4-fluorophenyl)ethyl group,
2-(2-chlorophenyl)ethyl group, 2-(3-chlorophenyl)ethyl group,
2-(4-chlorophenyl)ethyl group, 2-[2-(trifluoromethyl)phenyl]ethyl group,
2-[3-(trifluoromethyl)phenyl]ethyl group, 2-[4-(trifluoromethyl)phenyl]ethyl group,
2-[4-(N,N-dimethylamino)phenyl]ethyl group, 2-phenyloxyethyl group,
2-(2-chlorophenoxy)ethyl group, 2-(3-chlorophenoxy)ethyl group,
2-(4-chlorophenoxy)ethyl group, 2-(phenylthio)ethyl group,
2-(N-phenyl-N-methylamino)ethyl group, and 2-(N-ethyl-N-phenylamino)ethyl
group.

AR represents a group as any one of naphthalen-2-yl group,
6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group,
6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group,
6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamino)naphthalen-2-yl

group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group, 2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group, 2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group, 1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group, 2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group, 2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group, 2-oxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-2,3-dihydrobenzothiazol-6-yl group, 2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group, quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group, 1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group, 1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group, 3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group, imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group,

1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group, 1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, and benzoxazol-5-yl group.

The group Y represents hydrogen atom, methyl group, or ethyl group.

In another particularly preferred embodiment of the present invention, the compound represented by the formula (I) or a salt thereof satisfies all of the following requirements.

Link represents -(CH₂)_n, symbol n represents an integer of 2.

C³ represents carbon atom to which AR bonds, C⁴ represents carbon atom to which Rs bonds, C⁵ may be replaced with V, and C² and C⁶ represent unsubstituted ring-constituting carbon atom.

V represents nitrogen atom, or carbon atom substituted with Zx, and Zx represents a group as any one of chlorine atom, bromine atom, methyl group, hydroxyl group, methoxy group, amino group, N-methylamino group, N-ethylamino group, N-propylamino group, N-isopropylamino group, N,N-dimethylamino group, N,N-diethylamino group, formylamino group, acetylamino group, carbamoylamino group, mesylamino group, and N,N-dimethylsulfamoylamino group.

Rs represents -O-Rc. p in Rc represents an integer of 2, and A⁴ represents a single bond or methylene. A⁵ represents -C(O)-, -C(S)-, or -S(O)₂. Rd represents a group as any one of methyl group, ethyl group, propyl group, isopropyl group, butyl group, isobutyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, benzyl group, 4-chlorophenylmethyl group, and 4-fluorophenylmethyl group. Re represents a group as any one of isopropyl group, butyl group, isobutyl group, t-butyl group, cyclopropyl group, cyclopentyl group, cyclohexyl group, cyclopentylmethyl

group, cyclohexylmethyl group, phenyl group, 4-methylphenyl group, 4-chlorophenyl group, 4-fluorophenyl group, propyloxy group, isopropyloxy group, butyloxy group, isobutyloxy group, t-butyloxy group, cyclopropyloxy group, cyclopentyloxy group, cyclohexyloxy group, cyclopentylmethoxy group, cyclohexylmethoxy group, phenyloxy group, 4-methylphenyloxy group, 4-chlorophenyloxy group, 4-fluorophenyloxy group, N-propylamino group, N-isopropylamino group, N-butylamino group, N-isobutylamino group, N-t-butylamino group, N-cyclopropylamino group, N-cyclopentylamino group, N-cyclohexylamino group, N-phenylamino group, N-(4-methylphenyl)amino group, N-(4-chlorophenyl)amino group, N-(4-fluorophenyl)amino group, pyrrolidino group, piperidino group, and morpholino group.

AR represents a group as any one of naphthalen-2-yl group, 6-hydroxynaphthalen-2-yl group, 6-methoxynaphthalen-2-yl group, 6-(2-hydroxyethoxy)naphthalen-2-yl group, 6-aminonaphthalen-2-yl group, 6-(N-methylamino)naphthalen-2-yl group, 6-(N,N-dimethylamine)naphthalen-2-yl group, 6-(2-hydroxyethylamino)naphthalen-2-yl group, benzo[b]furan-5-yl group, 2-methylbenzo[b]furan-5-yl group, 3-methylbenzo[b]furan-5-yl group, 2,3-dimethylbenzo[b]furan-5-yl group, benzo[b]thiophen-5-yl group, 2-methylbenzo[b]thiophen-5-yl group, 3-methylbenzo[b]thiophen-5-yl group, 2,3-dimethylbenzo[b]thiophen-5-yl group, 1H-indol-5-yl group, 2-methyl-1H-indol-5-yl group, 3-methyl-1H-indol-5-yl group, 2,3-dimethyl-1H-indol-5-yl group, 1-methyl-1H-indol-5-yl group, 1,2-dimethyl-1H-indol-5-yl group, 1,3-dimethyl-1H-indol-5-yl group, 1,2,3-trimethyl-1H-indol-5-yl group, 1-ethyl-1H-indol-5-yl group, 1-ethyl-2-methyl-1H-indol-5-yl group, 1-ethyl-3-methyl-1H-indol-5-yl group, 1-ethyl-2,3-dimethyl-1H-indol-5-yl group, 1-propyl-1H-indol-5-yl group, 2-methyl-1-propyl-1H-indol-5-yl group, 3-methyl-1-propyl-1H-indol-5-yl group,

2,3-dimethyl-1-propyl-1H-indol-5-yl group, 1-(2-hydroxyethyl)-1H-indol-5-yl group,
 1-(2-hydroxyethyl)-2-methyl-1H-indol-5-yl group,
 1-(2-hydroxyethyl)-3-methyl-1H-indol-5-yl group,
 2,3-dimethyl-1-(2-hydroxyethyl)-1H-indol-5-yl group, benzothiazol-6-yl group,
 2-methylbenzothiazol-6-yl group, 2-methoxybenzothiazol-6-yl group,
 2-aminobenzothiazol-6-yl group, 2-oxo-2,3-dihydrobenzothiazol-6-yl group,
 2-oxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group,
 2-thioxo-2,3-dihydrobenzothiazol-6-yl group,
 2-thioxo-3-methyl-2,3-dihydrobenzothiazol-6-yl group, quinolin-3-yl group,
 quinolin-6-yl group, 2-oxo-1,2-dihydroquinolin-6-yl group, benzo[d]isothiazol-5-yl
 group, 1H-indazol-5-yl group, 1-methyl-1H-indazol-5-yl group,
 1-ethyl-1H-indazol-5-yl group, 1-propyl-1H-indazol-5-yl group,
 1-(2-hydroxyethyl)-1H-indazol-5-yl group, 3-hydroxy-1H-indazol-5-yl group,
 3-hydroxy-1-methyl-1H-indazol-5-yl group, 1-ethyl-3-hydroxy-1H-indazol-5-yl group,
 imidazo[1,2-a]pyridin-6-yl group, 1H-pyrrolo[2,3-b]pyridin-5-yl group,
 1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl group, 1-ethyl-1H-pyrrolo[2,3-b]pyridin-5-yl
 group, 1-propyl-1H-pyrrolo[2,3-b]pyridin-5-yl group,
 1-(2-hydroxyethyl)-1H-pyrrolo[2,3-b]pyridin-5-yl group, isoquinolin-6-yl group,
 1-oxo-1,2-dihydroisoquinolin-6-yl group, cinnolin-6-yl group, and benzoxazol-5-yl
 group.

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